

Vol. LV.

1915

9-35-05  
5

# AMERICAN BEE JOURNAL

California State Library,  
Sacramento, Calif.  
Dec 14 Dec 15

FEBRUARY



# American Bee Journal



PUBLISHED MONTHLY BY  
**American Bee Journal**  
 1st Nat'l Bank Bldg. Hamilton, Illinois

## IMPORTANT NOTICE

THE SUBSCRIPTION PRICE of this Journal is \$1.00 a year, in the United States of America and Mexico; in Canada, \$1.10; and in all other countries in the Postal Union, 25 cents a year extra for postage. Sample copy free.

THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec 15" on your label shows that it is paid to the end of December, 1915.

SUBSCRIPTION RECEIPTS.—We do not send a receipt for money sent us to pay subscription, but change the date on your address-label, which shows that the money has been received and credited.

## Advertising Rate, Per Agate Line, 15c.

14 lines make one inch.

Nothing less than 5 lines accepted.

## DISCOUNTS:

3 times 14c a line 12c      9 times 11c a line 12c  
 6 times 14c a line 12c      12 times 11c a line 12c

Reading Notices, 25 cents, count line.  
 Goes to press the 23d of the preceding month.

## Celebrated Queens Direct from Italy

**Bees More Beautiful, More Gentle, More Industrious, Long Tongued, The Best Honey-Gatherers.**

PRIZES:—VI Swiss Agricultural Exposition, Berne, 1895. Swiss National Exposition, Geneva, 1896. Bee-Keeping Exhibition, Liege Belgium, 1896. Bee-Keeping Exhibition, Frankfurt O. M. (Germany). Convention of the German, Austrian and Hungarian Bee-keepers, August, 1907.

**Universal Exposition, St. Louis, U.S.A., 1904, HIGHEST AWARD**  
 Dominion of Canada, Department of Agriculture, Central Experimental Farm.

OTTAWA, Sept. 5, 1913.  
 Sir:—I am pleased to inform you that the three queens were received in good condition, and have been safely introduced.

(Signed) C. GORDON HEWITT,  
*Dominion Entomologist.*

Oklahoma Agricultural Experiment Station,  
 STILLWATER, Oct. 7, 1913.

Your queen arrived in first-class condition, and introduced her without any difficulty.

(Signed) PROF. E. C. SANBORN,  
*State Entomologist.*

Extra Breeding Queens, \$3.00; Selected, \$2.00; Fertilized, \$1.50; lower prices per dozen or more Queens. Safe arrival guaranteed. Write

Member of the **ANTHONY BIAGGI,**  
 National Bee-keepers' Ass'n) Pedevilla, near Bellinzona, Italian Switzerland.

This country, politically, Switzerland Republic, lies geographically in Italy, and possesses the best kind of bees known.

Please mention Am. Bee Journal when writing.

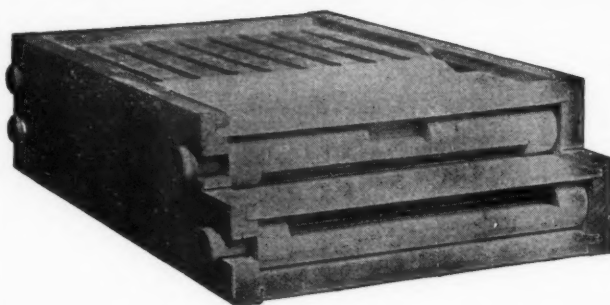
## Bee-Supplies

LET US FIGURE WITH YOU

We know we can satisfy you on quality.  
 Write for catalog.

**C.C. CLEMONS BEE-SUPPLY CO.**  
 Dept. S., Kansas City, Mo.

## Roller Entrance Bottom Board



WHY WORRY IN  
 THE WINTER TIME  
 ABOUT YOUR BEES  
 BEING MUSTY IN  
 THE SPRING, THIS  
 BOTTOM - BOARD

keeps bees and combs clean and healthy. Dead bees drop away from frames. If by chance they become short on stores during the spring months, "open the rear or front," and hand them a supply. It is done easy with this Bottom Board. Made in 8 and 10 frame size. \$2.50 per. Nothing but pure Italian stock in out-yard of 100 colonies.

Breeders \$10 to \$25. Guarantee Satisfaction.

## CHAS. G. SCHAMU

INVENTOR AND MANUFACTURER

Box 48

Liverpool, New York

The New Year is here—We are ready for your Bee Supply orders

Don't Forget  
 HERE IS THE  
 ONLY PLACE  
 YOU CAN GET

# MUTH

SERVICE  
 QUALITY  
 SPECIAL HIVE

## THE NEW MUTH 1915 CATALOG

Send for it—Watch for it—Wait for it

It will soon be out—everything you need is in there—HIVES—BROOD FRAMES—FOUNDATION—SECTIONS—SMOKERS—BEE VEILS—BRUSHES, ETC., ETC. WRITE NOW—DON'T DELAY. Should you wish to order some supplies before you receive the new catalog, use our 1914 edition as prices will be the same. If you haven't a copy, write for it.

## THE FRED W. MUTH COMPANY

204 WALNUT STREET "The Busy Bee Men" CINCINNATI, OHIO

P. S.—Ship us your old combs and cappings and let us render them for you. Our process extracts the last drop of wax from the slumgum. This means money for you. Write for full particulars.

## SUPPLY YOUR HONEY CUSTOMERS

— WITH —

## Fine White Alfalfa

CAN SUPPLY ANY QUANTITY

[Extracted honey packed in 60, 10, 5, and 2½ lb. cans

Send for sample and prices today

**DADANT & SONS, Hamilton, Ill.**









# American Bee Journal

## CEDAR WOOD

Hive bodies, 8 or 10 frame, 25c each. Covers and bottoms, prices upon application. Falcon Foundation and Bee Supplies.

### FROFALCON QUEENS

Everything for the beekeeper. Address.  
**J. C. Frohlinger, Berkeley, Calif.**  
Greater San Francisco

## BARNES' Foot-Power Machinery



Read what J. L. PARENT, of Charleston, N. Y., says: "We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey-racks, 500 brood-frames, 8,000 honey-boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this saw. It will do all you say it will." Catalog and price-list free.

Address, **W. F. BARNES**,  
605 Ruby St., Rockford, Ill.

## TRY MY FAMOUS QUEENS

### From Improved Stock

The best that money can buy; not inclined to swarm, and as for honey gatherers they have few equals.

### 3-Band Golden, 5-Band and Carniolan

bred in separate yards, ready March 20. Untested, 1, \$1.00; 6, \$5.00; 12, \$8.00; 25, \$17.50; 50, \$34; 100, \$65. Tested, 1, \$1.50; 6, \$8.00; 12, \$15.00. Breeders of either strain, \$5.00. Nuclei with untested queen, 1-frame, \$2.50; six 1-frame, \$15.00; 2-frame, \$3.50; six 2-frame, \$20.40; nuclei with tested queen, 1-frame, \$3.00; six 1-frame, \$17.40; 2-frame, \$1.00; six 2-frame, \$23.40. Our Queens and Drones are all reared from the best select queens, which should be so with drones as well as queens. No disease of any kind in this country. Safe arrival, satisfaction and prompt service guaranteed.

**D. E. BROTHERS, Attalla, Ala.**

Ask for our free paper

### SUPERIORITY OF CARNIOLAN BEE

Investigate the merits of these bees before placing your orders for queens the coming season. Orders booked now for queens and bees by the pound in season.

**Albert G. Hann, Clinton, N. J.**

## A TRIAL PACKET of This Grand TOMATO FREE!

Rose's GRAND RAPIDS MARKET TOMATO was originated by Mr. George E. Rose, the Editor of THE FRUIT BELT, America's Greatest Horticultural Journal. This tomato is the very earliest of the heavy cropping varieties, it yields abundantly, a Grand Shipper, and is the Most Delicious Tasting tomato ever put upon the market. In Size, the individual fruits will average a half-pound each, and are very uniform in shape, size, and color. There are few seeds, as the tomato is solid, and cuts like a piece of beef-steak. One grower near Grand Rapids, Mich., sold OVER TWO THOUSAND DOLLARS worth of these tomatoes off of two thousand vines. We are willing to stake our reputation on this tomato. The seed cannot be procured from Seedmen, as we own the entire stock. We are GIVING IT AWAY to introduce THE FRUIT BELT, and you can get a packet, if you act now.



## The Fruit Belt America's Greatest Horticultural Journal

Shows you How to Make Money Raising Fruit: How to Prune and Thin Properly: How to Control Insects and Plant Diseases by Spraying: What Varieties to Plant: How to Set out New Orchards: How to "Rejuvenate" Old Orchards. THE FRUIT BELT is a Big Illustrated Magazine, Filled with Good Things for You.

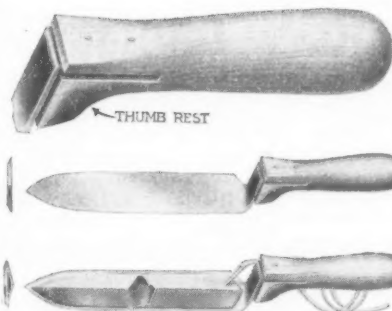
### TRIAL OFFER

We will send THE FRUIT BELT to your address for the remainder of this year, upon receipt of Thirty Cents, and we will send to you, by return mail FREE, a trial packet of Rose's Grand Rapids Market Tomato seed. Don't delay, the stock is limited. Address—

**THE FRUIT BELT**, R.112, HAWKINS BUILDING, GRAND RAPIDS, MICHIGAN

## BINGHAM HONEY UNCAPPING KNIVES

### With the New Improved Cold Handle

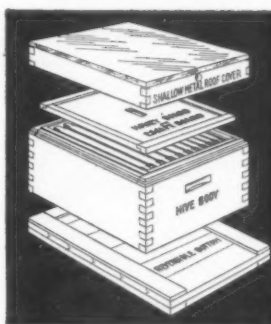


Standard length, each...\$ .75 Ship wt., 20 oz.  
Extra long... .85 " 24 "  
Steam heated with 3 ft. tubing... 2.50 " 46 "

Our knives are made of the very best material and by the same local workmen for the past 30 years. There have been many imitators of the Bingham Knife which accounts for the various poor contraptions on the market. The new Cold Handle is a decided improvement over all others as it fits the hand perfectly; the lower part of the wood handle projects down along side the shank of the knife, forming a Thumb Rest that does not become hot when used with hot water or steam. Mr. Townsend says this knife appears to be the best yet produced.

**A. G. WOODMAN COMPANY,**  
Grand Rapids, Mich.

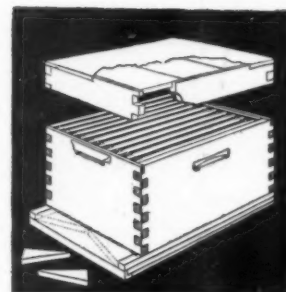
## PROTECTION HIVES



10 Protection Hives, \$22.50

Do you know that PROTECTION HIVES are double walled, either air spaces or packing as you prefer, with 3/4 material in the outer wall? That they will sell for less than 60 cts. per hive more than single wall hives? Have you ever tried to keep a single boarded house hot in the winter or cool in the summer? Wake up brother! Wake up! You know the benefits of protection.

Send for catalog and special circulars, 10 illustrations.



10 Single Wall Hives, \$16.70

## Woodman's Section-Fixer

A combined Section Press and Foundation-fastener of pressed steel construction

This machine folds or forms comb-honey sections and fastens top and bottom comb foundation starters all at one handling, thus saving a great amount of labor. It can be arranged for any width, 4 1/4 x 4 1/4 or 4 x 5 section. Other sizes, 50 cts. extra for special adjustment. Top and bottom starters insure the comb firmly attached to all four sides, a requirement to grade fancy. Increase the value of your crop by this method. If you have but ten swarms of bees you cannot afford to be without one, is the statement of one customer. Send for special circular, ten illustrations.

Price, with lamp and one form, \$2.75; wt. 4 lb. 10 oz. Without lamp, \$2.50; wt. 4 lb. 4 oz. Extra form block, 20c; wt. 5 oz.

**A. G. WOODMAN CO.,**

Grand Rapids, Michigan



## SWEET CLOVER SEED

We now have on hand a good supply of sweet clover seed as per prices below. The **re-cleaned seed** is **machine cleaned**, and entirely free from chaff, dust and straw sometimes found in unhulled seed:

	1 lb.	10 lbs.	25 lbs.	100 lbs.
White Sweet Clover—unhulled ( <i>Melilotus alba</i> ) re-cleaned seed.....	25c	\$2.25	\$5.00	\$18.00
White Sweet Clover—unhulled ( <i>Melilotus alba</i> ) hand screened.....	20c	1.80	4.00	15.00
Yellow Sweet Clover—hulled ( <i>Melilotus officinalis</i> ).....	26c	2.40	5.75	22.00
Alsike Clover seed.....	25c	2.25	5.00	19.00

When wanted by parcel post, bags will be included in weight. No charge for bags.

**AMERICAN BEE JOURNAL, Hamilton, Illinois**

# American Bee Journal

WANTED at once 1000 more customers to try some of that sweet pure "Falcon" foundation and some of those high class "Falcon" bee supplies. Samples of "Falcon" foundation, copy of "Simplified Bee-Keeping" and Red Catalog will be mailed free for the asking.

**W. T. Falconer Mfg. Co., Falconer, N. Y.**

## We Have Decided

Not to change the prices for 1915, and will not mail new catalogs to our customers unless we are requested. Order from last catalog. Send us list of goods wanted for best prices. No one can beat us. We have been in business since 1899. Reference, any mercantile agency.

**H. S. DUBY & SON, St. Anne, Ill.**

## Beekeepers' Supplies

Write us for our 64-page catalog. FREE. Full information given to all inquiries. Let us hear from you. We handle the best make of supplies for the beekeeper. Beeswax exchanged for supplies or cash.

**J. NEBEL & SON SUPPLY CO.,**  
High Hill, Montg. Co., Mo.

## Leather Colored Italians

I claim that my strain of bees is as good as the best, and guarantee them to give satisfaction. I have the kind of Queens that you want. Am booking orders now. Write early.

**C. S. ENGLE,**  
Beeville, Bee Co., Texas

# Where the Dovetailed Hives are Made

Three entire floors of our factory are devoted to making hives, sections, frames, supers, shipping cases, queen-cages, nucleus boxes, and all other articles made of wood, a glimpse of one of which can be had from the accompanying illustration.

Here are located the many and often complicated machines and appliances, most of which were designed and built especially for us and each one of which makes but a small part of the hive. Visitors have often expressed surprise that so small an object as a section honey box, for instance, should require so much handling and pass through so many hands until the final product is ready for shipment.

There are probably few beekeepers who have any idea how the dovetailed hive is made, and who realize that,

"**ROOT'S GOODS**" have, indeed, become a synonym for perfect workmanship and the best materials, and are known in every civilized country of the world.

Our 1915 catalog (the largest we have ever published) is now ready for distribution, and will be promptly mailed, postpaid, on receipt of a post card.

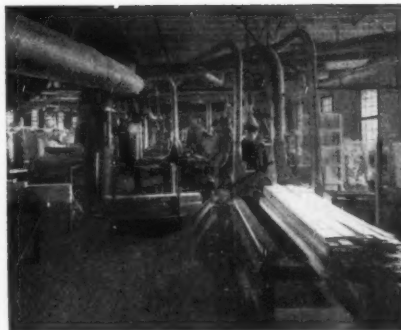
**THE A. I. ROOT COMPANY, Executive Offices and Factory, MEDINA, OHIO**

### — Branch Offices —

New York, 139-141 Franklin St.  
Philadelphia, 8-10 Vine St.  
Chicago, 215 West Ohio St.  
St. Paul, 850 Payne Ave.

San Francisco, 58 Sutter St.  
Des Moines, 915-917 Walnut St.  
Syracuse, 1631 West Genesee St.  
Indianapolis, 859 Massachusetts Ave.

Zanesville, Ohio.  
Mechanic Falls, Maine.  
Washington, 1100 Maryland Ave., S. W.  
Los Angeles, Calif., 948 E. Second St.



A Corner of One of the Floors Devoted  
to Woodworking

first of all, the lumber must be carefully selected and seasoned, then cut into the right lengths, passed through the machines which dovetail the sides and ends; through other machines where they are fitted together; nailed and sandpapered; provided with rabbets in the interior, etc., etc.; while at the same time the bottom-board and the cover is made in another part of the factory, each one of which requires similar handling. The various parts of the hive are then sent to the assembling room, where they are put together, and finally to the packing room, where they are packed in such a manner as to occupy the least possible space (thus reducing the cost of transportation to a minimum), and shipped to all parts of the globe.

# American Bee Journal

## Our Special Big Four Magazine Offer!

### Woman's World—Household—People's Popular Monthly—Farm Life

A special arrangement secured by the American Bee Journal, enables us to offer to our subscribers for a limited time only the American Bee Journal for one year with a full year's subscription to all four of the above high-grade publications, at the special price of **\$1.30**.

**Four Big Magazines and American Bee Journal All Five for \$1.30**

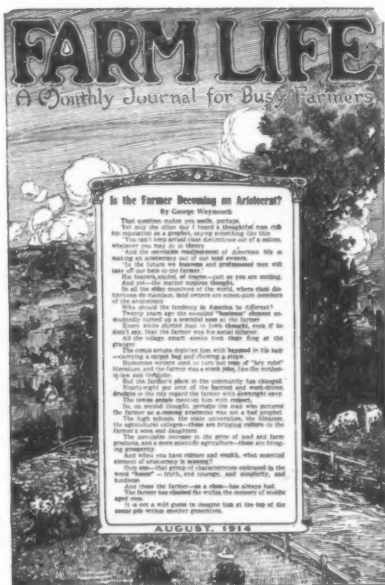


WOMAN'S WORLD has more subscribers than any other magazine published, over two million a month. Its articles, its stories, its illustrations, are the best that money can buy. It is a magazine to be compared with any home magazine in the country, regardless of price, without fear of contradiction of any claims we make for it. Its stories are by authors known the world over.

**This offer supplies you with a Magazine of the best quality, giving you a year's supply of good literature at a saving of one-half cost**

This is the **best** and biggest combination clubbing offer ever presented to the public. The publisher of the American Bee Journal is glad to announce to his subscribers the completion of this splendid arrangement, whereby he can offer such an excellent list of publications in connection with a year's subscription to the American Bee Journal at the remarkable price of \$1.30 for all five. This offer is good for a **short** time only, and may be increased at any time.

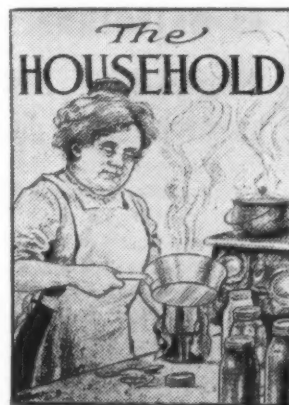
**AMERICAN BEE JOURNAL, Hamilton, Illinois**



FARM LIFE is a publication adapted to the everyday life of the farm folks, brimfull of things that help to make the farm life more cheerful and homelike. Special articles by authorities on all subjects of interest to the up-to-date farmer.



PEOPLE'S POPULAR MONTHLY is one of the greatest popular fiction and home magazines published. Contains complete stories each issue.



THE HOUSEHOLD—A favorite magazine in a million homes. Every issue has many interesting features.

## CLOSING OUT SALE

### —OF— BEE BOOKS, VEILS AND SMOKERS

I have some of the following that I would like to close out at once, and on which I make **reduced prices, all postpaid**:

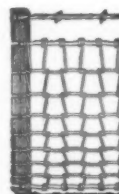
"Langstroth on the Honey-Bee" (Latest edition, \$1.20).....	\$1.00
"Songs of Beedom" (10 bee-songs—25c).....	.15
"Honey-Money Stories" (25c).....	.15
"Pearce's Method of Beekeeping" (50c).....	.30
Hand's "Beekeeping by 20th Century Methods" (50c).....	.30
Wilder's "Southern Bee-Culture" (50c).....	.30
Muth Bee-Veil (75c).....	.60
Danzenbaker Bee-Smoker (\$1.00).....	.80

**\$3.60**

Or all the above in one order to one address for **only \$3.00**. (The retail price of the bunch is \$4.95.) Address,

**GEORGE W. YORK, SANDPOINT, IDAHO**

**WESTERN BEE-KEEPERS** can save get the best goods obtainable, especially made to meet Western condition. Send for new catalog and special price list to  
**Colorado Honey-Producers' Association  
Denver, Colorado**



## FARM FENCE

**41 INCHES HIGH FOR**  
Stays only 6 inches apart.  
Wires can not slip. 100  
styles of Farm, Foultry  
and Lawn Fencing direct  
from factory at money  
saving prices. Ideal Galv.  
**BARBED WIRE \$1.45**  
80-rod spool. Catalog free.  
**KITSLMAN BROS. Box 85 Muncie, Ind.**



Special Announcement to Beekeepers in

**Ohio, Kentucky, <sup>CENTRAL AND SOUTHERN</sup> Indiana and the East**

Having discontinued the distribution of LEWIS BEEWARE from INDIANAPOLIS, INDIANA, and PEEBLES, OHIO, we have recently arranged with

**THE FRED W. MUTH CO.,**  
**204 Walnut Street, CINCINNATI, OHIO**

For the distribution of LEWIS BEEWARE in your territory

The MUTH COMPANY is one of the largest honey and bee supply houses in the country, and CINCINNATI is one of the best shipping points

With this new distribution arrangement, we can serve you better in every way than we have heretofore

**BEEKEEPERS IN NORTHERN INDIANA**

Will be served from our MAIN OFFICE and FACTORY at WATERTOWN, WISCONSIN. As WATERTOWN is only one night's freight from CHICAGO, shipments leaving us in the afternoon pass through CHICAGO the next morning, going over one of the numerous roads direct to destination.

**THE NEW LEWIS 1915 CATALOG**

**Almost entirely rewritten**

It is now out. If you are not on the Lewis mailing list, send in your name at once or you will miss something good

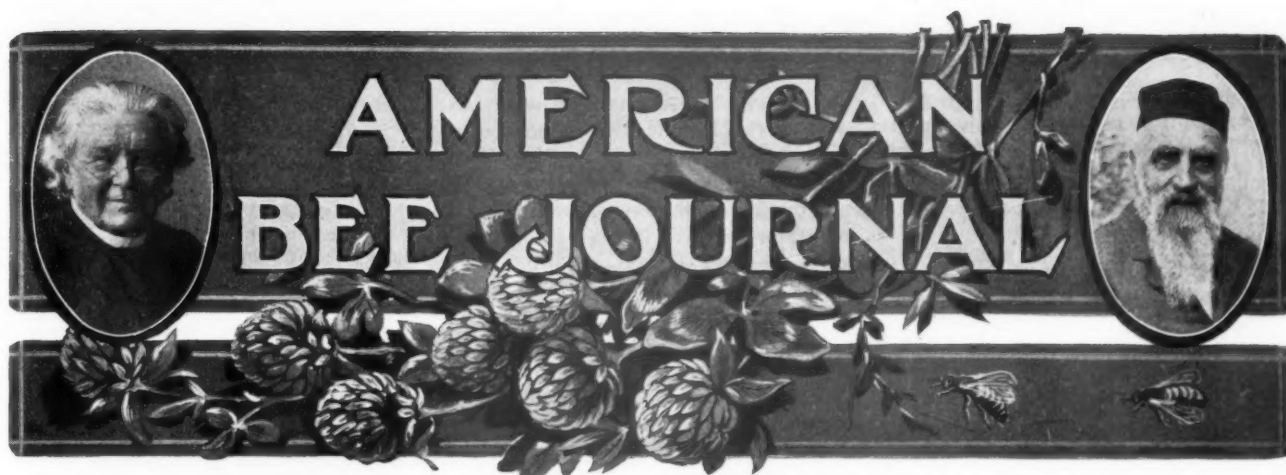
44 pages brimful of good things including 150 illustrations, many of them new and showing articles more in detail than ever before

**IT'S YOURS FOR THE ASKING—A POSTAL BRINGS IT**

**G. B. LEWIS COMPANY**

Manufacturers of Lewis Beeware

**Watertown, Wisconsin**



(Entered as second-class matter at the Post-office at Hamilton, Ill., under Act of March 3, 1879.)

Published Monthly at \$1.00 a Year, by American Bee Journal, First National Bank Building

C. P. DADANT, Editor.  
DR. C. C. MILLER, Associate Editor.

HAMILTON, ILL., FEBRUARY, 1915

Vol. LV.—No. 2

## EDITORIAL COMMENTS

### Overproduction

Concerning the overproduction of honey of which some people complained a year or two ago, it appears that, some 20 years ago, there was already some complaint to that effect. In the American Bee Journal of May 24, 1894, Hon. Eugene Secor, quoting United States statistics, showed that less than 64,000,000 pounds was reported in the census, and said:

"It does not seem much like overproduction, when only one pound of honey per capita is produced in the United States." To this Editor York replied: "No it is not overproduction, but under distribution."

### Breeding—Inducing Queens to Lay

In an editorial, in *Gleanings in Bee Culture* lately, E. R. Root speaks of two carloads of bees that were sent to Virginia Oct. 20 and Nov. 16, and says:

"In both carload shipments it was observable that the shaking up, loading and unloading *en route* started the queens to laying in all the hives. By the time the shipments arrived there were eggs and larvæ to be seen in all the hives."

In a similar occurrence, with similar results, the elder Dadant wrote: "When colonies are disturbed, for any reason, the bees fill themselves with honey from their cells, in the anticipation of being compelled to abandon their home. While they are thus laden, they offer honey to their queen oftener and in greater amount. The queen being thus induced to eat, the eggs develop in her ovaries and the result is

increased laying. A natural production of honey, or artificial feeding, or scratching the cappings of sealed combs by the apiarist, or continuous disturbances of well-supplied colonies will produce similar effects." This was written in 1872.

The testimony above given of increased laying from a simple continuous disturbance at a time when queens do not usually lay eggs at all, would tend to confirm the given explanation. We may add to this influence, however, the increase of heat caused by the disturbance of confined colonies. From this valuable information the reader will draw useful conclusions.

### Our Cover Picture

The excellent photographs of Mr. Mendleson's apiary, given in California department of this number, brought recollections of a picturesque California apiary printed as front cover on the American Bee Journal in August, 1907. We have reproduced the photograph on our front cover, this issue. It represents a Los Angeles county apiary.

### Is Sealed or Unsealed Brood Better to Hold a Swarm?

Referring to question of "Subscriber," page 423, and the answer thereto, my correspondent says he is confident he has seen the statement that bees will never desert uncapped brood. I don't doubt it. Indeed it has been, and I think is yet, the orthodox thing to say that the best thing to hold a swarm after it has been hived is

to give it a frame of unsealed brood. I don't know for certain that this popular belief is wrong—at least wrong so far as it teaches that unsealed is better than sealed brood to hold a swarm—but I suspect it is. I wish we could know for certain, and it ought not to be so very hard to decide. If there should be put in one side of a hive a comb containing sealed brood and no unsealed brood, and on the other side a comb containing sealed brood, and then a nucleus or a small swarm should be put into the hive, I think they would be likely to cluster at one side or the other, upon the comb having the strongest attraction for them.

In actual practice it may not be so important to have the right answer to the question, for generally when a frame of brood is given it contains both sealed brood and unsealed, and it is quite possible that this is better than to have either sealed or unsealed alone.

According to the usual belief, it would not be at all illogical to suppose that an unsealed queen-cell would be more respected by the bees than a sealed one, but facts, as already intimated, are against such belief.

C. C. M.

### Sugar Syrup Crystallizing

Those of our readers who took an interest in the discussion of the proportion of water and sugar for syrup will be interested in reading the following letter to Dr. Miller by Mr. McKinnon. We will be glad to have the matter sifted to a satisfactory solution. See what Prof. Bartholomew said on this subject at the Minnesota meeting:

"I am enclosing in this letter a sample of candied sugar stores that I took from the entrance of a hive in the cellar. There are about a dozen others that show the same signs of candied stores.

"These colonies were fed a sugar

# American Bee Journal

syrup made of  $1\frac{1}{2}$  water to 2 of sugar, one teaspoonful of tartaric acid being added to every 20 pounds of feed. As my colonies are all placed in the cellar it would be foolhardy on my part to disturb them; but from past experiences I don't have to be told that a good part of their stores is a dead loss, but if this thin feed properly made will candy in my yard, it ought to interest others."

JOHN A. MCKINNON.  
St. Eugene, Ont.

## Poet of American Beekeeping

We are indebted to our old friend, Eugene Secor, of Forest City, Iowa, for a neat pamphlet entitled, "The Calendar," containing 17 short poems written by him. Our friend's name and writings are well-known to the veterans in beekeeping. The files of the American Bee Journal contain a number of his essays. We reproduce from his poem on "May," which appeared in May, 1901, in these columns, two pretty stanzas:

One day  
I passed the orchard where the bloom  
Seemed coaxing honeybees  
To stop and sip its tempting wine,  
And pack their basket-knees  
With dainty bread on which to dine—  
All laden with perfume—  
And it was May.

In May  
The dandelions ply their art  
To spread a honey feast;  
They fling their yellow banners out  
Against the beaming East  
As if to say to bees about,  
"We yield our inmost heart,  
Kiss us we pray."

The words of the "Beekeepers' Songs," formerly published by Mr. York, are nearly all by Mr. Secor. It may be well to add, for the information of the younger readers, that Mr. Secor

is a patriarch of 73 summers, who has had a useful life. He has been Mayor of his city, member of the Board of Trustees of the Iowa Agricultural College, president of several horticultural and apiarian associations, of the National Beekeepers' Association at the Washington meeting in 1892, judge of the honey exhibit of the Columbian Exposition of 1893, and General Manager of the National Beekeepers' Union from 1897 until 1902. A son of Mr. Secor, Alden, is chief editor of "Successful Farming," one of the successful farm magazines.

In sending us this little gift, Mr. Secor wrote: "I feared you would not care for that kind of writing, and yet I wanted you to know that I cared for you." A delicate compliment could not be worded in a nicer way. The feeling is heartily reciprocated.

## Iowa Inspection

We acknowledge receipt of the 3d Annual Report of the State Bee Inspector of Iowa, by Frank C. Pellett.

This is a work of 126 pages, magnificently illustrated and replete with information. Every beekeeper of Iowa should have it. It contains a number of essays read at the meeting of the State Association. Of especial importance among them is that by E. F. Phillips, the Government expert at Washington, upon "Temperature and Humidity in the Wintering of Bees."

Send for it to Frank C. Pellett, of Atlantic, Iowa.

State Association for three years, and having known Dr. Wolfe for the same length of time, I feel qualified to introduce him to the beekeepers of Missouri, and beg that each will give him all the assistance possible.

By the time this is in print we shall have been incorporated under the laws of Missouri; a point we have been



AUSTIN D. WOLFE OF MISSOURI

trying to reach for three years, and the credit for its accomplishment rests with the good members of the society, and every member is a good one or he would not belong.

Now let every citizen, whether a member or not, jump in and help get our foulbrood law through the Legislature at this term, and we will make old Missouri one of the great bee States of the Union. Send to Dr. Wolfe for a copy of the proposed law. Liberty, Mo. J. F. DIEMER.

## MISCELLANEOUS



## NEWS ITEMS

**Moves to Louisiana.**—Mr. J. F. Archdekin, a queen-breeder formerly located at St. Joseph, Mo., has bought a 200-colony outfit at Big Bend in Louisiana. Mr. Archdekin expects to do queen-rearing in his new location.

**New Secretary of the Missouri Apicultural Society.**—Dr. A. D. Wolfe, of Parkville, Mo., was born in Montclair, N. J., 1861. He entered the ministry as a graduate from New York University and Union Theological Seminary; spent six years in Iowa and Nebraska; since 1896, he has been in Missouri acting variously as president of a school, librarian and registrar of Park College and as pastor of prominent churches. He made his first acquaintance with the bee when he caught a swarm in a coffee box; fell in love with the art, and has ever since handled the

bee from both practical and scientific standpoints. He reads enormously of bee-literature; keeps a few colonies, but sets such a good example that his bees must work. He makes his own equipment; belongs to the Missouri Apicultural society, and was elected secretary December, 1914.

His quickness, accuracy, training, education and practical common sense make him a most valuable man for the place; his letters and records are models of conciseness, short sentenced, and his points always easily understood.

Perhaps we ought to admire the man who tries but fails, but we don't. The man who tries and succeeds gets the applause, and such a man is Dr. Wolfe; when you meet him you recognize at once that you have met a real man, unassuming, modest, capable and up-to-date.

Having served as secretary of the

**The War and Swiss Beekeeping.**—"I have been unable to keep my promise to send interesting Swiss beekeeping views. But I hope to be able to redeem it next year, if we are preserved from the mishaps of this terrible war which surrounds us.

"The year has been very bad for our bees; in the Jura-Bernois, the crop was a failure. Then came the war. We have been mobilized to guard our frontiers. As I was called to service and was released only a few days ago, for six weeks, I was unable to make photographs. However, I took four, which I send you.

"Owing to the mobilization many apiaries have suffered, and many bees will die for lack of attention. The owners having gone to the front, there was no one to take care of the bees. During the trip of our regiment in the Franches-Montagnes, I had occasion to visit an apiary which was starving, for want of attention, in September. It was composed of 28 colonies, which must be dead by this time. As we have been three years without a crop, many of our friends are discouraged. But I advise them to take courage, as we may soon have a good season.

"Today, Dec. 6, and for the past three or four days, we have had bright



# American Bee Journal

sunshine and the bees have taken flight just as in May, but it will not last.

"My own 20 colonies, which I fed before my departure, are in good shape with plenty of food. I trust they will all be living next spring.

"Foulbrood appeared here in 1912, but thanks to the activity of the inspector and the willingness of the owners, it was overcome and we think we are are rid of it. It did not have a chance to do much damage.

"JOSEPH WALTHER.  
"Delémont, Switzerland."

We glean the following from a letter just received from our venerable friend, Edouard Bertrand, formerly editor of the *Revue Internationale*, living at Geneva, Switzerland:

"Thus far, in Switzerland, we have been spared, but all our youth is in arms at the frontier and business is paralyzed. Many people are without work, incomes are stopped, and one is compelled to reduce expenses. We keep our servants though unable to pay them wages, for they would be out of work. My wife has joined the 'Prisoners' Agency,' which has undertaken the finding of information concerning soldiers that have either been killed or made prisoners, whether French English or German. This agency has helped many families to find out the fate of their sons or husbands. It has received as many as 15,000 enquiries in a day, and it often has requests of fathers who have four or five sons, whose fate is unknown. War has terrible results, even in our neutral country, and the suffering is great. Our health is good, but I am exceedingly nervous, owing to these cruel circumstances."

## House Apiaries—A Plea for Them.

The following letter, concerning the "Notes from Abroad" for September, was not intended for publication, but as it gives in very forcible words a plea for house apiaries, we hope our correspondent will forgive us for publishing it. Hear all sides, then decide:

"DEAR MR. DADANT—Your point of view, in judging our apiary methods, has much interested me. It proves the well-known fact, that the appearance of things changes according to the position of the observer. You recognize that our method of beekeeping has great points of convenience, but you doubt its adaptability to American conditions, and you say: 'Would it be possible to combine the use of a bee house with the expansible hives and supers which enable us to secure our large crops?' You doubt whether it be possible for us to extract as much honey in a day as you do. I do not know how much honey you extract in a day, but it is a fact that here, the apiarist removing the combs can supply, without help, as many of them from the hives as the reversible extractor can extract. In the leaf hive, where each comb is as accessible to the apiarist as in the Dadant hive, when harvesting, we do not touch the empty combs or the half filled ones, but only the full ones, replacing them at once

with already extracted combs. When the extracting is over, our hives are already thus supplied with empty combs. The only difference between our work and yours is that you do it all at one time, while we do it in three or four different times, according to circumstances, always at the proper time, whether the weather be good or bad.

"To know whether it is advisable to extract, all we need to do is to open the rear door of the hive and glance at the appearance of the combs. An examination is unnecessary. Besides, the honey being extracted from warm combs is quite liquid. It is at once strained through three sieves of different meshes, the finest being at the bottom. By this process we obtain very pure honey, which is promptly put into tins. In our well closed bee houses the work may be done without any annoyance from the bees and without risk of robbing.

"I have never used gloves, and years may pass without the need of even a veil. It is the strange bees flying about the open hives which cause stinging. In closed house apiaries, they have no access to the operation. It is true that our apiaries are more expensive than yours, but with us everything is more expensive. For instance, a Dadant hive costs us between \$5.20 and \$5.60; a leaf hive costs \$8.40. You may readily see the difference.

"I read that in America many beekeepers use bee houses in which to extract the honey. Why then do you not place leaf hives in them, where they will be protected against weather changes and where wintering is less difficult; where examinations are so easy that one never needs help; where a very small bee smoker, and even only a light cigar, is sufficient to quiet the bees, and the handling of them is a pleasure?"  
H. SPÜHLER.

"Zurich, Switzerland."

Mr. Spuhler's leaf hive is a hive from which the combs may be drawn from the end of the frames instead of from the side, as in most of the Berlepsch style of hives. The frames in it are at right angles with the entrance instead of parallel with it. Hence, his ability to draw out any frame he wishes, leaving the others in the hive.

**The Akron, N. Y., Meeting.**—The beekeepers' meeting which was held at Akron, N. Y., Dec. 15, 1914, was a success as far as the purpose of the meeting was concerned. While the weather was very inclement, snow and bitter cold, the beekeepers who are real honey-producers were there in sufficient numbers to form an association to be known as the Western New York Honey Producers' Association.

It was repeatedly brought out that the beekeepers must stick together and try to increase the sale and consumption of honey as a food. They must also buy their supplies cooperatively and apply business principles to beekeeping as well as they are applied to other lines of occupation.

Another argument taken up was the difference in the prevailing prices of

honey which would not be so if sound principles were applied.

The following officers were elected: President, John N. DeMuth, Pembroke, N. Y.; vice-president, J. Roy Lincoln, Niagara Falls, N. Y.; secretary-treasurer, William Vollmer, Akron, N. Y.

It was also decided to hold a field meeting and basket picnic at the apiary of the president the first Saturday in August, 1915.

WILLIAM VOLLMER, Sec.

## National Beekeepers' Association

A preliminary announcement of the annual convention and official meetings of delegates from affiliated societies, to be held at the Auditorium Hotel, Denver, Colo., Tuesday, Wednesday, and Thursday, Feb. 16, 17, and 18, 1915. It is to be held jointly with the meeting of the Colorado State Beekeepers' Association.

### HOTEL RATES.

Room without bath, single, \$1.00 per day and upwards.

Room with bath, single, \$1.50 per day and upwards.

Excellent café and meal service may be had. The hotel is convenient to all street car connections and adjacent to railroads.

The convention apparently will have ample, comfortable quarters with a large assembly hall, reception room, committee room, etc. The reception room will doubtless be used as an exhibition hall.

### NOTICE TO DELEGATES.

The secretary has mailed to each affiliated association delegates' cards, to be used as credentials. It is absolutely essential to send the original direct to Mr. George W. Williams, Secretary, Redkey, Ind., on or before Feb. 1.

The program will consist of official executive meetings and of lectures, demonstrations, etc.

### PROGRAM.

#### TUESDAY, FEB. 16.

9:30 A.M.—Meeting called to order and organization of the convention, appointment of committees, presentation of credentials, report of Credentials Committee, and announcements and invitations.

1:00 P.M.—President's report.  
Transaction of business which shall regularly come before the session.

Papers.  
8:00 P.M.—General session of the association for the reading of papers and for discussions.

#### WEDNESDAY, FEB. 17.

9:00 A.M.—Delegates' session for the transaction of business followed by the reading of papers.

1:00 P.M.—General program, continuing the reading of papers.

8:00 P.M.—Public session. At this time it is hoped to provide illustrated lectures and a program of general interest to the public. Arrangements are in hand for this.

#### THURSDAY, FEB. 18.

9:00 A.M.—Business session, concluding the transactions of the association, followed by the reading of papers.

1:00 P.M.—Session for discussions and the reading of papers to be followed by adjournment.

It may be desirable to hold a special session in the evening for those who do not leave town that night. Special ar-

# American Bee Journal

rangements for this will be announced during the convention.

## PROGRAM OF PAPERS.

An effort is being made to secure the best talent in the country. Not all will be present to read their papers, but the members are assured of hearing some of the most recent and worthy remarks from the apicultural leaders on this continent.

The following titles have been received. \*Expected to be present:

"Some Legal Phases of Beekeeping"—J. G. Gustin, Missouri.  
 "Breeding Bees"—Geo. B. Howe, New York.  
 "Inspection in Iowa"—\*Frank C. Pellett, Atlantic, Iowa.  
 "The Production of Extracted Honey—Apiary Inspection and the Disease Situation in Ontario"—\*Prof. Morley Pettit, of Guelph, Ont.  
 "Migratory Beekeeping"—\*E. R. Root, Medina, Ohio.  
 "Straining and Clarifying Honey"—H. H. Root, Medina, Ohio.  
 "Autumn Mating to Control Inheritance."—Prof. F. W. L. Sladen, Ontario, Canada.  
 "A Plea for Better Bees"—Jay Smith, Indiana.  
 "A Competency for the Hive"—\*E. D. Townsend, Northstar, Mich.  
 "Honey Publicity"—\*Geo. W. Williams, Redkey, Ind.  
 "The Educational Value of Beekeepers' Associations"—A. Y. Yates, Connecticut.  
 "Best Methods of Making Increase"—A. C. Allen, Wisconsin.  
 "Marketing Honey"—John C. Bull, Indiana.  
 "Status of Beekeeping in South Carolina"—Prof. A. F. Conrad, South Carolina.  
 "What the Montrose County Beekeepers' Association Has Done"—\*Prof. J. J. Corbut, Colorado.  
 "Changed Conditions"—J. E. Crane, Vermont.  
 "Two of Europe's Greatest Beekeepers: Thos. W. Cowan and Edouard Bertrand"—C. P. Dadant, Illinois.  
 "Beekeeping Costs."—Wesley Foster, Colorado.  
 "What the County Association Can Do in Cooperative Buying"—Robert E. Foster, Colorado.  
 "Selling Extracted Honey"—Elmer Hutchinson, Michigan.  
 "The Pollination of Fruit Bloom"—John H. Lovell, Maine.  
 "Opportunities and the Farmer Beekeeper"—J. B. Merwin, New York.  
 "Agricultural College and Beekeeping"—\*Prof. Frederick Millen, Michigan.  
 "Cuban Conditions"—D. W. Millar, Cuba.  
 "A Glimpse at Florida: Her Beekeeping and Her Bee Flora"—E. G. Baldwin, Deland, Fla.  
 "Development of the Honey Market"—\*Dr. E. F. Phillips, Washington, D. C.  
 "Pennsylvania Beekeeping"—\*G. H. Rea, Ohio.  
 "Cooperation Among Beekeepers"—J. W. Stine, Iowa.  
 "Cooperation vs. Competition Between State Associations"—\*J. H. Stoneman, of Idaho.  
 "Advertising Value of Apiarian Exhibits at Fairs"—George W. York, Idaho.

The following have promised papers the nature of which is not known:

\*Prof. C. E. Bartholomew, Iowa; \*E. J. Baxter, Illinois; \*J. M. Buchanan, Tennessee; \*E. G. Carr, New Jersey; \*Prof. Francis Jager, Minnesota; Allen Latham, Connecticut; \*Frank Rauchfuss, Colorado.

The Committee on Local Arrangements, of which the chairman is Mr. Wesley Foster, of Boulder, Colo., announces that a large attendance is anticipated. In his department notice will be found concerning reduction of rates on the certificate plan for points presumably west of Chicago. Those attending the convention should inquire concerning rates of their ticket agent.

For the entertainment of the guests

at the convention, the Committee on Local Arrangements has made the following suggestions: That time be devoted to sightseeing while in Denver; and that a banquet be a feature of our entertainment, at which honey cookery will be introduced. Presumably at this banquet will be distinguished guests from the State of Colorado, including, it is hoped, the Governor.

Throughout the convention the committee has arranged for luncheon parties of groups of our members, so that the acquaintanceship may be enlarged as far as possible.

The Colorado Agricultural College weekly bulletin, sent to all the country papers of the State, is being used to promote the interests of the association.

Mr. Foster has further planned for the 17 county inspectors of Colorado to be present. This will mean a session devoted to apiary inspection at which all inspectors and those interested in this phase of apiculture will attend.

As usual, a group photograph will be made.

Special provisions are being made and entertainment provided for ladies in attendance.

Exhibits will be in charge of a custodian. Probably some of these demonstrations will be held at the warehouse of the Colorado Honey Producers' Association, Mr. Frank Rauchfuss in charge.

Among the distinguished and scientific guests, it is hoped that the State Entomologist, Prof. C. P. Gillette, and President of the college, Dr. C. A. Lory, will favor us with addresses. Professor Gillette is in charge of the inspection work of the State, and is therefore vitally interested in beekeeping projects.

For those having lantern slides or illustrated lectures, a stereopticon will be arranged. It is desirable that those wishing the use of the stereopticon communicate directly with Mr. Wesley Foster, Boulder, Colo.

The program has now become so extended that the sessions will be divided into sections whereby it will be possible to fully carry out the plans. This will eliminate the somewhat tedious executive details from the general sessions for the purpose of reading papers and the discussion of subjects

concerning beekeeping. Complete details of the program, arrangements and division into sections will be available at Denver, Feb. 16.

There will also doubtless be evening programs of interest to particular groups.

It is suggested that an informal evening in the nature of a smoker be held for sociability and general discussions.

BURTON N. GATES, Pres.

Amherst, Mass., Jan. 14, 1915.

**Pennsylvania Meeting.**—The 11th annual meeting of the Pennsylvania State Beekeepers' Association will be held in the Capitol Building, Harrisburg, Feb. 23 and 24, 1915. An interesting program is in preparation. Everybody invited. Prominent speakers from other States are expected to be with us. The Legislature is in session at the same time. You can't afford to miss this meeting.

H. C. KLINGER, Sec.

**Special Car Secured for the Denver Meeting.**—A special tourist car or more if necessary has been secured to accommodate the delegates and visitors to the National Association meeting at Denver. The routing is over the Burlington railroad, starting from the Union Station, Chicago, at 11:00 o'clock p.m., Sunday, Feb. 14, and arriving in Denver at 7:30 a.m. Tuesday morning in ample time for the meeting. The fare between Chicago and Denver is \$22.75 each way. Lower berths are \$3.00, and they will accommodate two persons at the same price. The upper berths are \$2.40. The sleeper will be ready about 10:00 o'clock. I would advise you to buy your tickets at your home town clear through, as you will save this way in most cases. If you are going to the coast, you can have your ticket routed this way, and a one way ticket to the coast will allow stop-over in Denver for three days, if your ticket bears the full tariff limit. Be careful and arrange this provision, or you may not get the full time.

In reserving berths, write to A. J. Puhl, General Passenger Department, Burlington route, Chicago, mentioning that reservation is desired in the beekeepers' special car.

GEO. W. WILLIAMS, Sec.

Redkey, Ind.

## BEE-KEEPING FOR WOMEN

Conducted by MISS EMMA M. WILSON, Marengo, Ill.

### The Production of Comb Honey

The following paper was read by Miss Candler at the Wisconsin State Beekeepers' meeting:

To begin with, I aim to have everything ready so that when the flow begins I will have nothing to do but yard work. The supers and sections

are prepared in the winter. I use full sheets with bottom starters. A Boyum foundation fastener is my favorite of five different fasteners.

One super for each hive contains one or more bait sections. If I have enough of them I put in four drawn sections, placing them near the corners in the row next to the side row, first breaking down the drawn cells pretty well,



# American Bee Journal



THE BOX-HIVE APIARY MENTIONED IN MRS. KILDOW'S ESSAY



ANOTHER VIEW OF THE "BOX" APIARY

as it makes a better looking section when completed.

I begin to put on sections usually about raspberry bloom, depending somewhat upon weather conditions and prospects for a flow. If the colony is very strong two supers are given at once, placing the bait section super on first; if not so strong, only one is given, and those too weak for sections are given drawn extracting combs.

As soon as the lower sections are fairly well drawn out and filled, the super is raised and an empty one put under. Always an empty section super is kept on top until near the close of the flow, when bees must seal and finish what they have on the hive.

As soon as completed, except possibly the corner sections, the super is removed and placed on top of the hive or near its entrance for the bees to run out and crawl into their hive. If there is any danger of robbing a mosquito-bar bee-escape is used. I sometimes use a Porter bee-escape, but the mosquito-bar works quicker.

I pick out the unfinished sections in a nearly completed super and put them back on a hive to be completed. I also sell some such sections as bulk comb honey.

Comb honey production has an advantage over extracted honey produc-

tion in that it requires less heavy lifting. A comb honey super or case is only about half as heavy as a super of extracting combs. It has a disadvantage in that colonies run for comb honey are somewhat more inclined to swarm; with proper watchfulness and care, however, this swarming may be forestalled if not entirely prevented.

MATHILDE CANDLER.

Cassville, Wis.

## Restriction in Introduction Plan?

Evidently referring to the December number of the Bee Journal, page 407, D. E. Lhommedieu writes:

"I just read your 'Introduction' article. You did not follow the direct plan as you waited one day, which is the reason of the failure.

"If the new queen is smoked as per Mr. Miller's plan, before they in any way miss their own queen, the smoke fixes things so the bees never know the difference between the old and new queen."

Colo, Iowa.

D. E. LHOMMEDIU.

There is no doubt that Mr. Arthur C. Miller claims success when a new queen is given immediately upon removal of the old; for he says the introduction may be made without re-

moving the old queen at all. But if the method is to be confined to colonies not previously queenless its use would be greatly restricted. It would be completely barred from those numerous cases in which a colony has been found queenless, and a queen ordered by mail.

But is there not some mistake as to Mr. Miller thus restricting it? In *Gleanings in Bee Culture* for June 1, 1913, page 370, where Mr. Miller first publishes the plan, he says: "It makes no difference how long the colony has been queenless, whether just dequeened or so long that laying workers have infested it."

## Apicultural Education

The beekeeping sisters will be interested to know that the writer of this 1st prize essay is the wife of the efficient foulbrood inspector for the State of Illinois. It was read at the Illinois State Beekeepers' convention, 1914.

It would be expensive business to make hives such as shown in the pictures, for nowadays lumber as wide as 12 inches comes high. Just think of the size holding a trifle more than 2 bushels!

"Beekeeping as a business requires talent, and comparatively few persons succeed in making it profitable as an exclusive line.

"This is not the fault of the business, nor the locality, but of the men. It looks so easy that men are not willing to take the necessary time to become fully familiar with the business, as they would in other lines.

"Our best and most successful beekeepers are those who have given apiculture special study, and it behooves us to form organizations to awaken interest on the part of the beekeepers. One great object of these organizations, or field meets, is to glean from our up-to-date beekeepers knowledge which they have acquired by long experience. By conversation with them we may fortify ourselves against many errors.

"It is surprising what a diversity of hives, utensils and methods are to be found among beekeepers. At present there is an apiary near Fancy Prairie that has 22 colonies of bees, all in old "gums." These "gums" are made from 12-inch boards, are 3 feet high, and kept on benches about 20 inches from the ground. This yard is near the road, but would attract attention only by its old-time appearance. If this man secures honey enough for his own household he is doing well.

"In another locality we find a yard of 250 colonies in up-to-date hives. A well arranged yard with system and modern tools for work, a good honey house and work shop. This man realizes a handsome sum each year from his bees, and keeps them for profit. Now where is the difference? Not in the location, nor necessarily in the bees, but in the beekeepers themselves. One man, not keeping abreast with the times and the other a reader of bee literature, an investigator and ready to profit by others' experience.

"Education along the line of good



# American Bee Journal

hives, good location, ventilation, shade, sunshine and methods of handling are as essential as a good strain of bees. And these as well as bee diseases are topics of discussion at our conventions and field meets.

"The most important thing required is educational work. Many practical beekeepers who are keeping bees for commercial consideration, pay little attention to disease until it is in their own yard. They hardly know what it looks like, and often before they are aware of it, the disease has gone through a large part of the apiary.

"When the beekeepers come to understand the serious nature of these diseases, to recognize them and the

proper methods of treatment, a great improvement in apiculture will be made. Until a desire to understand beekeeping is awakened, and the beekeepers are anxious to examine the brood-nests of their hives, and learn to care for the various diseases, it is imperative that there be authority to compel proper attention.

"With conventions, field days, bee literature, and such men as Dr. Miller, N. E. France and C. P. Dadant to divide knowledge with us, and good practical application on our own part, we should make rapid strides toward profitable beekeeping."

[Mrs.] A. L. KILDOW.  
Putnam, Ill.

## CALIFORNIA BEE-KEEPING

Conducted by J. E. PLEASANTS, Orange, Calif.

### California State Beekeepers' Meeting

The annual meeting of the California State Beekeepers' Association was held at the Y. M. C. A. Building in Los Angeles on Dec. 16 and 17, 1914. There was a fair attendance, about 100 members being present.

The time was mostly devoted to business, and considerable enthusiasm was shown among the beekeepers, owing, no doubt, to the pleasing prospects already shown by the weather conditions. There have already been fine rains. And as the winter has begun so promising, we hope for a honey crop the coming season. The most interesting number on the program was Dr. A. J. Cook's address on "Honey as a Food." As all the beekeepers of the country know Dr. Cook, it is only necessary to say that the Doctor spoke in his happiest vein.

At the election of officers Prof. Willis Lynch, of Berkeley, was elected president; A. B. Shaffner re-elected secre-

tary; Messrs. Gilstrap and Allen re-elected on the Executive Board, and Harry K. Hill, of Willows, Glenn Co., elected as a new member of the Board. Glenn county is in the northern part of the State. This with the new president in the north also, and one member from the central, gives a majority of the Board now from the north. This is as it should be. We have had the majority in the southern part of the State for a long time, so it is only fair to divide.

It was decided to hold the next annual meeting in San Francisco.

### M. H. Mendleson.

This month we give Mr. Mendleson's letter describing his home apiary. Mr. Mendleson needs no introduction to any but the new members of the beekeeping world, being a man of national fame as one of the largest, if not the

largest, beekeepers of America:

"Attached are two photographs of my home apiary near Piru, Ventura Co., Calif. It now contains near 700 colonies of bees in prime condition for winter. It was located in the spring of 1895 on rough brushy sidehill land; on the most of it a wheelbarrow would tip over with a load of honey unless set carefully, consequently I terraced it in 1898, 1899 and 1900. Working among the bees, I had to work mostly evenings, and sometimes the main part of the nights, to grade with pick and shovel. These terraces were made about 14 feet wide, and about 350 feet long. Two rows of hives are set in each terrace, facing from the alleyway in pairs, a numbered stake between each pair, and an individual record kept of each colony. All queens are replaced, every year or two, from the best Italian stock that can be gotten.

"The lay of the grounds and the manner of terracing are such that there is no confusion of bees from monotony. These grounds are kept clean, costing me over \$100 annually to keep the weeds down. There is a great advantage in keeping an apiary clean and orderly, causing greater freedom and ease and pleasure of work, not as much loss of queens and bees from vermin, and almost entire freedom from the dangers of mountain fires. Great mountain fires have raged, surrounding nearly all of my apiaries, and only one colony of bees has been lost from fire. This one colony was a swarm that went into a pile of hives outside the apiary proper, and this would not have been lost had not my helpers neglected to keep the weeds down surrounding this pile of hives.

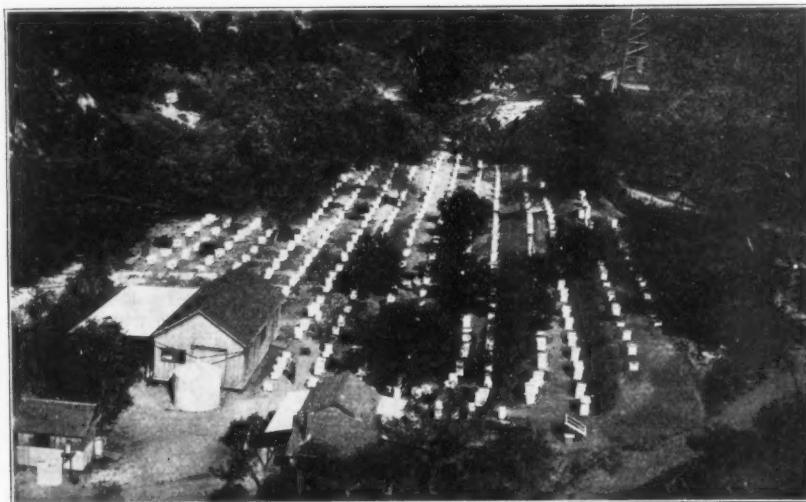
"This is a scenic canon, cheerful surroundings and healthful, and an ideal place for bees following our wet seasons. Mr. Ernest Root (many years ago) wrote a descriptive article of this apiary and location, and that *gem of manhood*, the late John H. Martin (The Rambler), gave an article of me in *Gleanings in Bee Culture* in 1893.

"Providence permitting, the first good season I have I shall run this apiary up to 1000 colonies or more, to test the range in a good season.

"I am using an 8-frame Root power extractor in this apiary, and I intend to put in another one and run 2 power extractors instead of one in this apiary alone, as the past season nearly three tons of honey were extracted within eight hours, the honey being thick the extractor could not keep up with the men, or there would have been near the four-ton mark for that day's work, as a test of what could be done in one day of less than 10 hours' work.

"In an extra photograph you will notice a row of cone-top galvanized iron seven-ton honey tanks. I have five of this capacity alone, made from 20-pound iron. Cone or closed top tanks prevent vermin and dust from dropping in. They are ventilated, and the honey always thickens much more when standing a while in these tanks. Cloth-top tanks are subject to draw in much of the dews.

"For the reason of the cool cloudy season preventing good secretion, and preventing bees from working in the



700 COLONY HOME APIARY OF M. H. MENDLESON AT HIS PIRU HEADQUARTERS  
Hives are kept in pairs and individual record of each colony kept.  
Notice how neat everything is.

## American Bee Journal

last part of the season, I filled only part of these tanks, as the crop was short.

"You will notice a person sitting by one of these tanks. Well, one morning I arose to find a tramp in front of my door, who informed me he had slept over night in my barn. I set him to

work. You are aware that tramps are naturally born tired; well, he was tired the whole season, and had a natural fear of the water. Hereafter I shall try to hire tireless helpers and such as are fearless of the water. I am glad I was not born tired. M. H. MENDLESON.  
"Ventura Co., Calif."



ANOTHER VIEW OF THE MENDLESON APIARY



Seven Ton Cone Top Honey Tanks of M. H. Mendleson

## BEE-KEEPING IN DIXIE~

Conducted by J. J. WILDER, Cordele, Ga.

### Wants to Produce Chunk Honey

"MR. WILDER:—I am just starting in the bee business and think of producing chunk honey. How do you fasten foundation to the top bars and what size of frames do you use?"

"Mojave, Calif. E. F. EVANS."

I use a foundation fastener of my

own invention which works in the same way as does the Parker fastener for sections. It is made very strong, although usually a light stroke or pinch is sufficient to do the work. Less than three-sixteenths of an inch of the foundation is taken up in fastening, so it is very economical, simple to manipulate, and it does the work quickly. Each season we put founda-

tion in over 8000 supers. Foundation is also put in all our brood-frames with it. We much prefer it to the wedge plan. Many are in use all over the country and giving perfect satisfaction. I use the regular standard size shallow extracting frames  $5\frac{3}{8}$  inches deep.

### Beekkeeping for Farmers

The average beekeeper in Dixie makes farming his main line of business and beekkeeping is a side issue. Our industry in the farmer's hands is almost unknown except as we write them up, so we are unable to reach the mass of them. This is to be regretted because the smallest farmer beekeeper should be enlightened to the point where he will use the modern hives and adopt the methods of the more extensive beekeeper.

The photograph shows a busy farmer and his apiary. In appearance and equipment it is perhaps not surpassed by apiaries of many more extensively engaged. He has a model farm apiary. At first he only had a few bees in box hives which he transferred into 8-frame dovetailed hives, using the regular full depth bodies for storing. The bees swarmed and increased the size of his small apiary. He added a few more colonies by buying box hives and transferring. The supplies were all bought from the returns of the bees and he has also a well equipped honey house. He is a very busy farmer, but finds spare time to care for his bees.

By raising extracted honey, swarming is reduced to a minimum. Supplies are bought in the flat and prepared during the slack farm season. Honey is also marketed at this time, making beekkeeping an ideal side issue and reducing expenses to a minimum.

There has not been a season when the average per colony was less than four gallons of honey, which sold readily at \$1.00 per gallon, an income of over \$4.00 per colony each season. This man's ability is not above that of our average farmer, neither is his location for honey any better.

Dear Dixie reader, there is not one of you who does not have a relative or a friend who is a farmer who would be interested in this article. Make out a list of those who you know would be interested and send it to our editor, requesting him to send each one a copy containing this article, and I am sure he will be delighted to do so. In this way you will help some one who is now discouraged over the panic conditions, and bring to his attention the possibility of a new industry.

### Apiary of J. R. Durden, Macon, Ga.

Mr. Durden is a "swamp" beekeeper and says that bees do best near great swamps. He has a number of apiaries similar to the one located on the Ochulgee river, which has a large acreage of open and dismal swamp along its banks containing many different kinds of honey plants, giving him a very good honey flow throughout the season.

Mr. Durden believes in keeping things neat about his apiaries, and is one of the few in our State who are



# American Bee Journal

making beekeeping their sole business.

Notice the style of covers he uses. He buys most any kind of cheap lumber, so it is bee proof when done; then to make it water proof he covers it with rubberoid, or some other prepared paper roofing, nailing it well at the ends, and merely tacking it at either edge. This allows a free current of air to pass under, and no shade-board is needed.

## Tourist Beekeepers In Florida

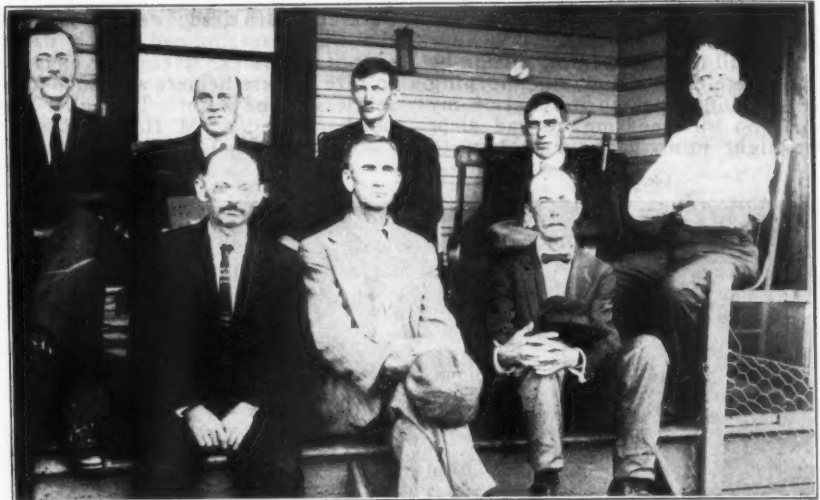
It is surprising to meet so many beekeepers from the North wintering in Florida, especially is this true at Bradentown; together with those who are engaged in beekeeping in this section, it is no trouble to call a meeting and have a large attendance, besides the regular weekly meetings when they collect about street corners and front porches.

At once some serious problem about our business is under discussion. Many such tourists have their own winter cottages; some rent rooms and live as economically as they desire. Some get jobs and work part or all the time while they are here, and some have apiaries here and spend much of their time with their bees. Others have small groves, while still others have gardens and raise vegetables.

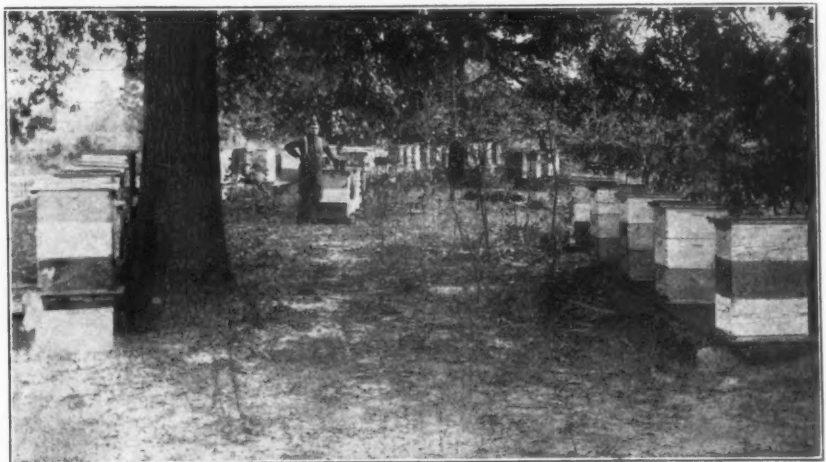
Many are often seen on docks fishing or out on a pleasure trip in a launch up and down the rivers and bays, spending much time on different islands. More and more come each winter, and if one fails to come down one winter you may be sure he will be back the next.

A number of these will soon have an extensive bee business at this end of the line as well as the other, dividing their time equally. This venture is panning out well, and how it is done will soon be made known.

Bradentown with its attractive winter climate is undoubtedly an excellent place for beekeepers to spend a profitable vacation. Beekeeping is yet in its infancy in this section.



A GROUP OF TOURIST BEEKEEPERS WINTERING AT BRADENTOWN, FLA



A FARMER BEEKEEPER IN HIS APIARY



APIARY OF J. R. DURDEN IN GEORGIA



# FAR WESTERN BEE-KEEPING

Conducted by WESLEY FOSTER, Boulder, Colo.

## National Comb Honey Grading Rules

The National Beekeepers' Association adopted grading rules for comb honey at the Cincinnati convention in 1913.

These rules have been published in the bee journals, but it is doubtful if they have been used to any great extent throughout the country. The writer is aware that upon a casual reading of the rules, the average beekeeper will gather that there are a numberless set of different grades. This is very nearly true. But that is not saying that every beekeeper who grades by these rules will have numberless grades. As an actual fact, he will have not more than three or possibly four.

If the beekeeper will grade his honey carefully according to the rules, each case will be uniform in the make-up of that case, so far as weight, color of honey and finish is concerned. He will have, if he is an average beekeeper, no extra fancy comb honey at all. This grade is illustrated in Fig. 1, which is just as the name implies. There is enough of this honey produced so that there is justification for the grade.

In Fig. 2 is shown a case of fancy comb honey. No attempt, of course, is made to show the color of the honey, or cappings, or the weight. These items would be impossible to show by pictures, and it is not necessary.

Fig. 3 shows one side of a case of

No. 1 comb honey. This honey is slightly off in finish, but it is No. 1 in all that the name implies.

Figure 4 shows one surface of a case of No. 2 comb honey. This honey is marketable and includes honey that, under Colorado rules, would be called cull honey. Cull honey is not a com-

mercial shipping honey, while this honey that has been classed as cull is worthy of the market. In fact, such honey as this No. 2 is quickly picked up on the big markets. Its ready sale is testimony enough that it is not cull stock, and should not be so classed.

The greater bulk of any one beekeeper's crop will be made up of fancy, No. 1 and No. 2. According to his expertness, will he be able to reduce the number of cases of No. 2 and increase the numbers of first grade and fancy.

With the enactment of the Federal Net Weight Law, it will be necessary to put sections of uniform weight together in cases, as the rules specify this and the law makes it advisable. In this way, Fancy White, Fancy Light Am-

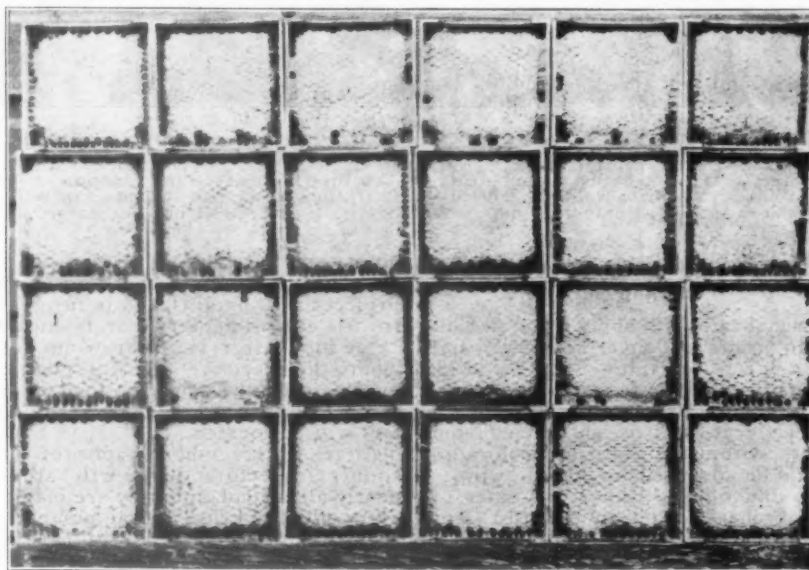


FIG. 2—FANCY. (NATIONAL RULES.)

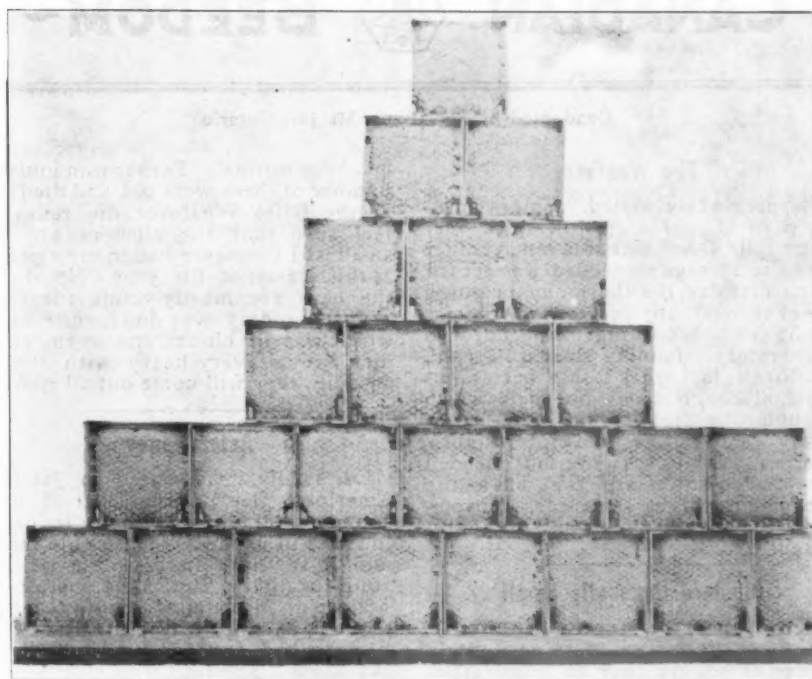


FIG. 1—EXTRA FANCY (NATIONAL RULES)

ber, Fancy Amber, etc., would have each section stamped with the weight, while on the end of the case would be stamped the grade and color and actual net weight, if desired, or the heavy, medium, or light could be used.

The outstanding advantages of the rules are that amber honey does not have to be sold at a No. 2 price if it is fancy in finish and quality.

It is possible to secure the maximum value for each section of honey if it is very near in finish, color and weight to every other section in the case.

As beekeepers gain more knowledge of the demands of the market and become more careful in grading and packing, the rules will be more fully appreciated. It is not argued that they are perfect. The writer thinks there are some minor changes desirable, but the principle upon which the rules are founded is correct.

These rules do not give opportunity to the buyer of a car of honey to "grade up" the lot by re-packing. For this reason, it will be hard for some beekeepers to make sales if grading by these rules. One's market, of course, must be studied and what is best for each one followed. But the trend will be toward this careful differentiation of different finishes, weights and color of comb honey.

# American Bee Journal



[SOME OF COLORADO'S COUNTY INSPECTORS]

1. R. C. Clary, Ft. Morgan. 2. H. E. Ingalls, Ordway. 3. S. C. Wood, Rocky Ford. 4. D. C. Polhemus, Lamar. 5. E. C. Bird, Boulder. 6. O. C. Richardson, Canon City. 7. Wm. Harkleroad, Grand Junction. 8. W. C. Evans Ft. Collins. 9. Louis F. Jouno, Denver. 10. Chas. Hollingshead, Sterling. 11. Chas. Ceek, La<sup>ve</sup> Animas. 12. Walter Martin Brighton. Other inspectors not shown are N. L. Henthorne, Platteville; S. Harlss, Cortez; G. Nichols, Montrose; J. H. Gardner, Grand Valley; R. W. Ensley, Read.

## Special Reduced Rates in Colorado for the National

Special rates will apply from all Colorado points to Denver Feb. 14, 15, and 16, 1915, and returning Feb. 18 and 19.

Persons desiring to attend meetings, conventions, etc., for which rate on the certificate plan is authorized from points within the State of Colorado, should be governed by the following:

On one of the authorized dates of sale purchase a one-way ticket to Denver, procuring from the ticket agent a certificate. In case agent at starting point is unable to sell through ticket, purchase to junction point and from there repurchase to Denver, procuring a certificate from each agent from whom ticket is purchased.

On arrival these certificates will be signed by the secretary of the meeting and presented to the Joint Agent. The Joint Agent, in case 50 or more certificates have been presented to him, will honor same, selling ticket to return destination at one-third the regular fare. In case of passengers who have been unable to purchase through tickets and who present two certificates, the Joint Agent will stamp both, selling ticket to junction point, and on presentation of the second certificate at such junction point, passenger can repurchase to return destination also at the reduced fare. Return tickets purchased on clergy permits at less than full tariff rate, and certificates of tickets purchased at less than 50 cents will not be recognized in computing the total of 50.

## The National

The Governor of Colorado (George A. Carlson) has been asked to welcome the convention to Colorado. An acceptance is expected soon.

Mayor J. M. Perkins will welcome the convention to Denver.

The Denver Convention League has secured for us the Tramway Auditorium for our larger sessions. This Auditorium is equipped with permanent projection apparatus, and is furnished to us complimentary. It is located three blocks from the Auditorium hotel where the executive sessions, committee meetings, the smaller attended sessions, exhibits and general headquarters will be located.

Attached are photographs of our county inspectors who will all, or nearly all, attend, and they are making every effort to bring a large number of beemen with them. We will have an entertainment guarantee of probably \$200, as we have about \$100 now. We are arranging to meet all beekeepers and visitors at the Union Station with automobiles, if we are notified of the time of their arrival three days in advance.

The Auditorium Hotel will grant us the lobby for exhibits, if we wish, and also will prepare an empty store room for exhibits if desired. Besides this we have a room about 20x30 for exhibits, and a long space under the balcony of the main convention room.

## CANADIAN



## BEEDOM

Conducted by J. L. BYER, Mt. Joy, Ontario.

## The Weather

As previously stated, winter set in early in Ontario, following a very warm fall. December was much colder than the average; a record was set for Christmas day, the thermometer going lower than at any previous Christmas for 58 years, according to the Toronto observatory. January started in cold, but for the last week it has been moderate, although it has not been warm enough for a flight for the bees. Ordinarily we do not get midwinter flights, and, as a rule, they are not needed much when stores are good, but as the bees had no flight since early November, a nice balmy day would be appreciated.

## Clusters Unusually Small

Bees appear to be wintering fairly, but the clusters seem to be very small. The poor season may be responsible, but during the small buckwheat flow, the population of the hives seemed to

be about normal. Perhaps an unusual number of bees were old and died late in the fall. Whatever the reason, I feel sure that the clusters are the smallest I have ever had in my apiaries at this season of the year. No doubt the bees are mostly young ones, as a lot of breeding was done while buckwheat was in bloom, and as the colonies are all very heavy with stores, possibly they will come out all right.

## Aster Honey

Editorially, it is stated in January American Bee Journal that I pronounce aster honey "light in color and nice in flavor." Please note that I said it is "light in body" as well, in "our locality." But, as a matter of fact, we do not claim to know much about it, as this year is the first time we ever had any surplus from it, or had hives "jammed" with this honey for winter, as is the case at one apiary at the present. Incidentally, we are



# American Bee Journal

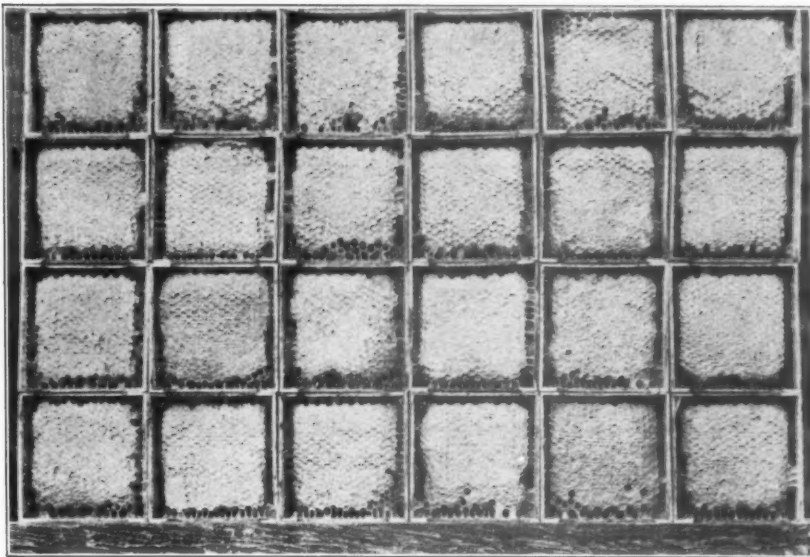


FIG. 3.—NUMBER ONE. (NATIONAL RULES.)

doing quite a lot of thinking as to the probable results in wintering at this same yard, but we are not losing any sleep over it.

Judging by past reports of this honey, it will give us no surprise if the loss should be heavy, particularly as the bees had no late fall flight. At date of writing (Jan. 12) the bees wintering on this honey are "dead to the world" to outward appearances, as all are completely covered with snow. This I learn from other sources, as the bees are 100 miles away, and we have not seen them since early in Novem-

ber, and do not expect to see them before Easter.

## Importing Queens

Regarding losses in queens when shipped from Europe (page 18 of January issue), my two attempts to get queens direct from Carniola, proved a failure, the queens being dead in the first case, and in the next nearly all workers were dead, and the queens so weak that they never rallied. In the first shipment, all had died of starvation as the bees were dry and not a vestige of food left.

grape sugar by the bees, through the secretions of their salivary glands, taxes their vitality to such an extent as to wear them out promptly. This is not the first time that sugar feeding has been disapproved. The venerable editor of the "Bulletin" published by the Swiss Association, Mr. Gubler; Dr. Heberle, the German scientist, on page 347 of our October number; Dr. Carton, the noted French physician on page 128 of our April number; in fact, a host of capable writers and scientists have described the exhausting effect of sugar feeding and have sounded a note of warning. However, very few of our beekeepers use sugar syrup for feed in other cases than those of absolute necessity.

Professor Bartholomew gave out the statement of scientific experiences concerning the proportion of sugar and water that will make a syrup which neither ferments nor crystallizes by standing. This syrup is made by diluting 850 grams of sugar in 500 grams of hot water. In other words, it is a proportion, by weight, of 85 of sugar to 50 of water, or a little over 1½ to 1.

A visit among the buildings of the University of Minnesota, both at the Farm and the headquarters, is sufficient to convince the visitor that this State is keeping in the head ranks for education. Those of our European friends who think America is only a vast country of untold resources, but not of science, should visit these immense colleges, with their numerous buildings and libraries, so quickly erected in plains erewhile inhabited only by redskin savages, now tenanted by enquiring and active students gathered from all parts of the civilized world.

PROF. FRANCIS JAGER.

When we asked Prof. Jager for his photograph to be published in this issue jointly with a report of the Minnesota State meeting, he first demurred, saying: "No one man up here has

## CONVENTION PROCEEDINGS

### The Minnesota Meeting

The Minnesota meeting took place Dec. 2 and 3, 1914, at the University Farm, between Minneapolis and St. Paul. It was attended by about 150, who represented all classes of beekeepers, scientists, practical honey producers and beginners.

As at the Iowa meeting of November last, a number of addresses by learned professors gave an insight into the possibilities of progress through new discoveries.

Apiculture is most liberally sustained by the University, and this is due to the able arguments of Prof. Jager, who has the Chair of Apiculture and has devoted all his energy to the task. He has succeeded in obtaining sufficient funds for the rearing of choice Italian queens to be sold by the State, at the reduced price of 25 cents each, to the honey producers of Minnesota. But as they do not expect to be able to rear over 3000 of these queens the first season, each applicant is limited to 12 queens. This is practical work worthy

of being commended to other State institutions.

Among the most interesting addresses were those by Prof. Jager himself, Prof. Bartholomew, of Iowa, on the "Law of Mendel" as applied to bees, the report of J. A. Holmberg, inspector, and a number of valuable essays by practical beekeepers such as L. D. Leonard, C. F. Greening, C. D. Blaker, etc.

The possibility of success in artificial fertilization of queen bees was cautiously hinted at by Prof. Jager. Those interested in this matter are referred to page 720 of "Science," Nov. 13, 1914. On so perplexing a subject upon which numerous failures have been recorded, we are not astonished that the experimenters wish to go slowly and be very guarded in their statements until success is achieved.

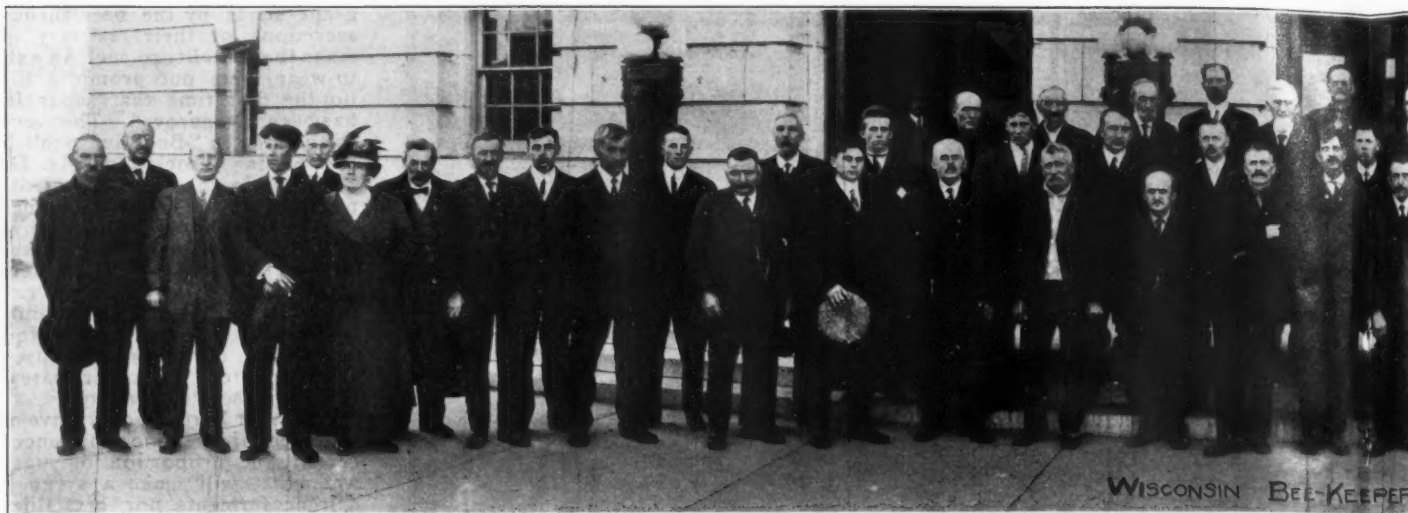
Both Professors Bartholomew and Jager warned the beekeepers against the excessive feeding of sugar syrup for winter stores, and especially of too thick syrup. Professor Jager held that the transforming of cane sugar into



PROF. FRANCIS JAGER, OF MINNESOTA



# American Bee Journal



done more than another. We have worked in unison, and in this way have received recognition and respect from University authorities and the State Legislature. Like ours has been, so I suppose most Universities in America are still skeptical as to the importance of the bee industry. Here is our record: First year, 1913, 25 students; second year, 1914, 70 students. What will the third year bring us at this rate of increase?

"The University has realized what the bee industry really means and has secured two more professors for 1915. Mr. L. V. France, of Madison, Wis., is one of them. The name of the other has not yet been announced. They are not going to allow the experimental work to suffer for lack of funds. The address of Dean Woods before the Beekeepers' Association Dec. 4, leaves no room for doubt on that important point. With the artificial fertilization of queens, the law of heredity and Mendel's law will be studied with a view of improving the present stock. Statistics of disease, of honey plants, of honey and wax production will be obtained and published. A bee library and museum will be established. A botanical garden is going to be laid out with a complete collection of all Minnesota honey plants. A model apiary of some 100 hives is going to be a feature of the University campus. Field meets will be held in various parts of the State. You already know of the plans for a queen-rearing yard, to furnish queens to the beekeepers at 25 cents each.

"But please give our beekeepers proper credit. They pushed the laws in favor of the bee industry; they organized; they planned; they worked; they put me there to work for them as I know how."

Professor Jager was born in Carniola, and educated in Vienna. He is a Slav, and proud of it. The country of his birth should be proud of him, for his quick gain of our language and his progressive ideas show him to be a man of action. Speaking of his race he says: "I hope the Slavs in Europe will win and get a foothold, just to teach Europe the spirit of serving the common good. So far they are a

sealed book to the rest of the world."

We commend the action of the University of Minnesota to those of other States that have not yet made any steps for instruction and improvement in apiculture.

The following officers were elected at the annual meeting of the Minnesota Beekeepers' Association:

President, Rev. C. D. Blaker, Minneapolis; vice-presidents, Rev. J. Kimball, Duluth; Mrs. J. A. DeLameter, Hopkins; secretary and treasurer, F. W. Ray, Minneapolis; executive committee, L. C. Pilcher, St. Paul; L. F. Sampson, Excelsior; and Mrs. M. McCabe, Minneapolis.

## Wisconsin State Beekeepers' Association Report

The annual convention was held in the Assembly Chamber, Capitol Building, Madison, Wis., Nov. 24 and 25, 1914, and was called to order by the president, Mr. N. E. France at 8:00 a.m. Visiting and getting acquainted was the order until 9:15, when the convention was called to order for business.

Officers present: N. E. France, president; Harry Lathrop, treasurer; Gus Dittmer, secretary.

About 80 beekeepers were present during the two days of the convention, including a number of ladies.

The president appointed as Committee on Resolutions and Recommendations, Gus Dittmer, E. B. Rosa and A. L. Kleeber. The minutes of the last annual convention were read and accepted.

Secretary's report was read and adopted.

The annual report of the treasurer, showing cash on hand of \$218, was read and accepted.

The question-box was then taken up. How many present here who have their bees in the cellar? ANS.—Twelve.

What is the best method for keeping moths out of extracting combs while not in use in warm weather? ANS.—Keep them on colonies. Keep paper between each two bodies, and sprinkle with sulphur. Use bisulphide of car-

bon and fume with burning sulphur.

Are the Italians worse robbers than the blacks? ANS.—Italians do not rob during a honey flow, and are less liable during a scarcity of nectar. They will also fight better to protect themselves. Blacks rob at any time, and are not so good to protect themselves.

What do the beekeepers here prefer, a large or regular entrance? ANS.—Almost all of the members present prefer a large entrance, from 1 to 2 inches high, the whole width of the hive, and only one entrance.

How many pounds of honey will a reasonably strong colony consume in the cellar and how many will it consume out-of-doors? ANS.—It will consume in the cellar, before putting out, from 8 to 15 pounds, but will consume more after it is put out than those wintered out-of-doors. Those wintered out-of-doors will consume more during winter, but less during spring. On the whole, they will consume more during spring and winter than those wintered in the cellar.

What is the best way to increase colonies? ANS.—One beekeeper said swarming, but most of them practice artificial increase. No particular plan was specified.

How many colonies can be kept in one place without overstocking? ANS.—It depends upon the location, climate, natural resources, etc., with which the beekeeper must make himself familiar. The difference may be such that anywhere from 100 to 300 might be kept in one place.

How can extracted honey in fruit jars be kept liquid? ANS.—Heat the jars with the honey in hot water at about 150 degrees before it granulates, leaving it in the hot water for some time.

What should be done with pollen-clogged combs? ANS.—Put them in a strong colony during the spring season. If possible, select one short of pollen, and it will clean them out for breeding purposes.

### AFTERNOON SESSION.

Two papers on "How to Produce Extracted Honey" were read by the secretary, the first by Frank Kittinger, of Caledonia, and the second by A. P.

# American Bee Journal



Raymond, of Greenwood. These will be published later.

Dr. E. F. Phillips explained the net weight law in reference to comb honey. Net weight must be marked within the fraction; for instance,  $14\frac{1}{2}$  ounces may be marked 14 ounces, but must not be marked 15 ounces. One ounce should be the tare for each section. The person shipping directly out of the State is responsible for the marking of the net weight, and not the producer who may have first shipped to him. The producer is responsible only if he ships out of the State directly.

Mr. E. B. Rosa spoke on the convenience and economy of the auto truck in working the out-yards.

Dr. Phillips spoke at length on "Foulbrood, and how to know doubtful cases and treatment for same." This subject was thoroughly discussed.

#### EVENING SESSION.

Dr. Phillips read a paper on the subject of "Temperature and Humidity in the Wintering of Bees." This paper is too lengthy for reproduction in these columns.

This was followed by five minute talks on "Wintering" by F. Kittinger and N. E. France, from which it appeared that young queens, plenty of young bees and an abundance of good stores are the essentials for good wintering. The cellar should be all underground. Mr. Kittinger puts his hives into the cellar and winters them without the bottom-board.

Lewis Post then read a short paper on "Wintering." [This article appears in our contributions.—EDITOR.]

#### WEDNESDAY—MORNING SESSION.

The subject of foulbrood was first taken up by N. E. France, explaining the symptoms. This was followed by J. J. Angel, who gave his experience and methods used to eradicate it.

L. V. France demonstrated with maps American foulbrood, showing location and extent of the disease by counties. N. E. France then spoke on European foulbrood and how to know it.

A paper on European foulbrood by Paul Scheuring was then read by the secretary. [This paper appears elsewhere in this number.—EDITOR.]

A paper on American foulbrood by Gus Gust was read.

The election of officers for the ensuing year resulted as follows: President, N. E. France; vice-president, F. Wilcox; secretary, Gus Dittmer; treasurer, Harry Lathrop.

Committee on Resolutions reported the following:

*Resolved*, That the date and arrangement for the next annual convention be left to the Executive Committee.

*Resolved*, That N. E. France be recommended for the appointment of judge of the apiarian exhibit at the next State Fair.

GUS DITTMER.  
A. L. KLEEBER.  
E. B. ROSA.

#### Adopted.

"A Short History of Beekeeping," by C. P. Dadant, was read by the secretary. This paper was received with much interest.

Miss Mathilde Candler read a paper on "The Production of Comb Honey." [See "Woman's Department," this number.—EDITOR.]

The convention adjourned at 12 m.

GUS DITTMER, Sec.

N. E. FRANCE, Pres.

## The Quebec Beekeepers—A Trip to Lower Canada

On the 2d of November, we went to Chicago and then in the later afternoon, boarded a through train for Montreal. Reaching that city the next day, we remained overnight and, the following morning again took the train for Quebec.

If our reader possesses a map of Canada, he will readily see, by referring to it, that a trip to Quebec from western Illinois brings us 6 degrees farther north. The difference in climate is very marked.

Along the St. Lawrence River, beyond Montreal, the land is flat, irregular in fertility, interspersed with small forests of birch and pine, but very thoroughly cultivated in all fertile parts. The farms extend in a northwest direction, at right angles with the course of the big stream. As this was one of the first settled districts of North America and they had to contend with the Indians (the

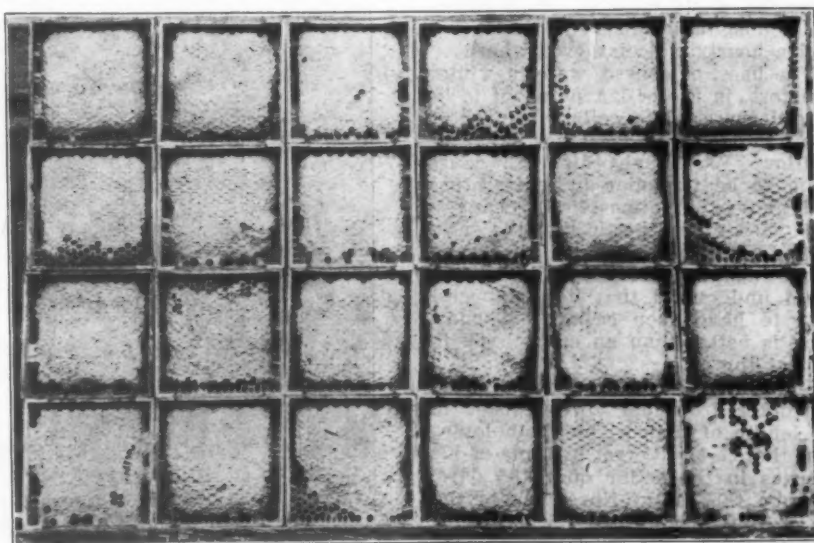


FIG. 4.—NUMBER TWO. (NATIONAL RULES.)



## American Bee Journal

savages as they call them), the land was divided in narrow strips, about 180 feet wide and several miles long, and each settler built his home at the near end of his strip in close proximity to his neighbors and to the public road; thus forming a link in an apparently endless chain of villages, separated from each other only by spots of waste land or woods.

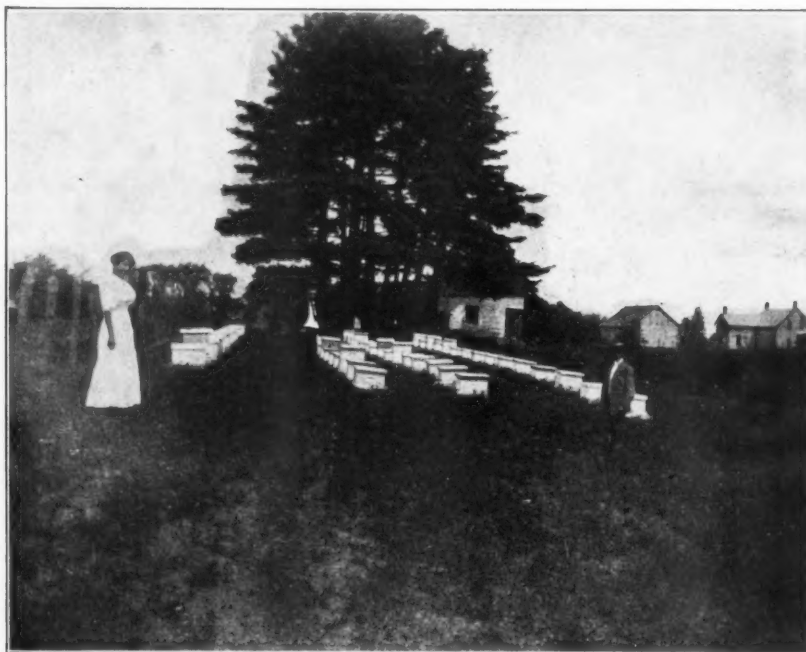
So trim and well painted are the houses that my wife thought these villages all newly built, till she was undeceived by the statement of an old gentleman who rode in the opposite seat on the train and volunteered the information that these were among the very oldest settlements in America, dating back some 250 years.

Arriving in the city of Quebec, late in the afternoon, we found the atmosphere so raw, though it was not freezing, that we were glad we had brought with us some heavy clothes. The city is built on a cliff overlooking the St. Lawrence and extends backwards down into a valley. It is fortified, but the oldest part is at the foot of the hill, where some of its streets are as narrow as some of the streets of European cities. The new Quebec is beautiful. We visited the Armory, where a few hundred volunteers were drilling and singing the Marseillaise in its native tongue, for the Quebecois are essentially French in language and traditions. But their allegiance to Great Britain is boundless and it is with great enthusiasm that they sustain the mother countries in the present European struggle.

The next morning early I called the president of the local Quebec Beekeepers Association, Mr. Verret, upon the telephone. Mr. Verret is a seedsman and a beekeeper, in Charlesbourg, a suburb of Quebec. He was delighted of our arrival and expressed it in as warm terms as come to the lips of an enthusiastic French-Canadian. He at once came after us with his automobile and we started on an excursion, visiting other beekeepers. It was delightful. The beekeepers all over the world must be of an especially hospitable disposition, for we find a hearty welcome everywhere.

The bees, of course, were in winter quarters, in the cellar, or about to be placed there. The cellars we visited are not deep. In fact they are very shallow. We thought this might cause them to be irregular in temperature and subject to atmospheric changes. But when we were told that the snow falls to a depth of 4 to 5 feet and banks against the buildings, we could understand that it is unnecessary to have deep cellars. A snow bank is better than an earth bank to protect the cellars.

The method of cellar wintering does not differ from our own, except in the length of time which the colonies pass there. Mr. Verret had one of his apiaries in the cellar once 186 days, or from the 1st of November to the 5th of May, and the bees came out in best of order. We must remark that in his locality there is very little



MRS. AND MR. OSCAR COMIRE AND FRIEND IN THEIR APIARY AT ST. FRANCOIS DU LAC, QUEBEC

honey except from white clover. Unhealthy or unripe honey, or honey containing an abundance of pollen grains, is rarely to be found. This is of importance in long confinement.

In spite of the cool, raw weather and the spitting of snow, we enjoyed the ride immensely. We followed the course of the St. Lawrence for 15 miles and passed by the Falls of Montmorency, the river of the same name plunging from a height of 240 feet. But these falls, like many others have been spoiled by industrial use. A dam has been built and most

of the water is utilized to produce electric power, just the same as with the Des Moines Rapids of the Mississippi here.

Every home in lower Canada is provided in winter with storm doors and storm windows, to keep out the cold. Between the two sets of sashes, they almost invariably have a set of lace curtains, with another pair of curtains on the inside. This double pair of lace curtains gives a most cosy appearance to the homes. There is so little soft coal used and the smoke from hard coal or wood is so incon-



ANOTHER VIEW OF THE COMIRE APIARY



# American Bee Journal

siderable that the paint on the homes looks as if it had just been applied and everything looks new.

We give two photos of Mr. Verret's apiary. This gentleman is a beekeeper of long experience. He has been for years a subscriber of both the *American Bee Journal* and *Gleanings* and has these magazines in bound volumes carefully treasured. His library is mainly bee books.

His experience with the Italian bee, on some 20 colonies, would indicate that the lower end of the Province of Quebec is unsuited to this race, owing to the same conditions of short summer and cool nights which make it undesirable in Switzerland. The very qualities of the Italians, of rising early, coming home late, and breeding

all summer seem to militate against them, in that region. They have no fall pasture and the crop is at end by the beginning of August, but the Italian bees persist in breeding plentifully until fall, so that they go into winter strong but destitute.

But this condition does not prevail through the entire Province. In the western counties which we visited later, for instance at St. Francois-Du-Lac, where the secretary of the provincial association, Dr. Comire, resides, there is a well defined fall harvest, from buckwheat, and the Italians are there considered most desirable. Everybody agrees that they are much more successful than the blacks in overcoming European foulbrood, which has not yet reached the

eastern confines of lower Quebec. So useful are they, that the Secretary of Agriculture of the Province has appropriated \$500 to pay for half the cost of queens purchased by the apiarists who apply to him. The only trouble has been that this sum proved altogether insufficient to provide as many queens as were desired and they are in hopes that the appropriation may be doubled or trebled, hereafter.

We spent two days at Charlesbourg, getting acquainted with the French Canadians. They raise large families and I was told that the population doubles every 20 years, which compels the young generations to make new settlements in the Far West, Saskatchewan, Alberta and British Columbia. The mother of our friend had had 14 children, 44 grandchildren and told us, as to the great-grandchildren, that she was making no attempts to keep tally on them. No danger of the race becoming extinct.

Reaching St-Francois-Du-Lac, by way of Montreal, we were welcomed by Dr. Comire, who took great pleasure in making us acquainted with everything that might interest us, while his wife and daughter showed us as much hospitality as we had met with the wife and mother of Mr. Verret.

Without any hope of reward, except the satisfaction of helping bee culture, Dr. Comire has freely spent time and money to organize the Provincial Beekeepers' Association, to secure statistical information and to spread knowledge of progressive methods among the beekeeping farmers. That he has succeeded is shown by the strong attendance at the Montreal meeting, about 150. Since everybody speaks French, the meetings were held in the French language. I was selected as one of the judges of the honey exhibit. I had noticed that the numerous displays were exceedingly similar, both in comb and extracted honey and of very high grade. I felt it would be a difficult task to make a selection for allotting the prizes and so I made a feeble attempt to escape the duty with a joke on the danger of making enemies among the unrewarded exhibitors. But the smiling President of the Association, Dr. Lalonde, replied promptly: "That is just why we selected you. You live 1200 miles away. Why should you care?" Luckily, I was given a very good partner in the person of Mr. Beaulne, of the Ottawa Experimental Farm. Together we did the best we could, in a case of such uniform quality of exhibits.

I will not try to give a synopsis of the meetings. But it will be of interest to the U. S. beekeepers to learn that in the Province of Quebec much more attention is given to the production of extracted honey than to that of sections. Many of the producers use very large hives, 12 or 14 frames, Langstroth size, with supers of equal capacity. The crops harvested would astonish some of our warm climate beekeepers. The honey crop



MR. VERRET IN HIS APIARY IN SUBURB OF QUEBEC—(Photo by Miss I. Renaud)



A VIEW OF THE VERRET APIARY AND BEE HOUSE  
Photo by Miss Renaud. Note the high board fence required when close to neighbors

# American Bee Journal

of 1914 of Hector Girouard, of St. Hyacinthe, vouched correct by several of his neighbors who were also present, was 6221 pounds from 15 colonies, spring count. Of this 4950 pounds was white clover and sweet clover, the rest buckwheat. He used 13 frame Langstroth hives. Mr. J. F. Prudhomme, one of the new Board of Directors of the Association and a very active apiarist, has kept a strong colony on scales during the season and has ascertained an increase in weight of 20½ pounds in 24 hours.

The Honorable Mr. Caron, Minister of Agriculture of the Province, in a verbal report which he made at the meeting, promised the co-operation of his Department in every possible way. But he complained that the statistics furnished by the beekeepers of the Province to the census were altogether inadequate, as the entire amount of honey shown in the Dominion census report for this Province was only 1500 pounds. He begged the beekeepers for more accurate statistics. Regarding this, several apiarists privately told me afterwards that they were not to blame, and that it must have been an oversight on the part of the Census officials as one beekeeper alone had reported a crop of 33,000 pounds. But such is the polite deference of the Canadians for their officials that no one had seen fit to make a reply to the Minister, by referring the error to the fault of the Census people.

An evidence of the interest taken by the Quebec government and legislature in the business of beekeeping is shown in several laws now in existence. The first concerns the inspection of apiaries. Inspectors are paid at the rate of \$5 per diem and expenses and the funds are supplied out of a \$55,000 appropriation set apart for agricultural organizations. There

is also a law forbidding the spraying of fruit blossoms with poisonous compounds, so as not to imperil the bees which work upon them. Another regulation requires the fencing of apiary grounds which are within 30 feet of a house or a public road, with an 8-foot board fence, extending at least 15 feet beyond the limit of the apiary. The beekeepers consider this regulation as a protection to their interests, since they may keep bees anywhere provided they comply with the law. Upon the whole I believe

that we of the States can learn fully as much from Canadian apiarists as they may learn from us, by comparing methods.

However much we would have liked to visit also the Ontario beekeepers during this trip, we had to forego that pleasure. We had allowed too little time for the trip and I needed to be back home by the 15th. Toronto is but a short distance from Illinois, when compared with Quebec and we will have numerous opportunities of attending their future meetings.

## CONTRIBUTED



## ARTICLES

### Wintering Bees

BY LEWIS POST.

(Read at the Wisconsin Meeting.)

**M**Y plan of wintering has been to prepare for the strength and endurance of my bees as much as I can from early spring until I have them provided with all needed stores in October for the coming winter.

The successful wintering of bees depends primarily upon good and sufficient stores in the hive to last until honey comes again, and when I say that, I don't mean sugar syrup. Of course, sugar syrup is better than "bug juice" (honey-dew), but I affirm it is not to be compared to good honey. Shame, I say, on the beekeeper who will rob his bees of their good honey for the questionable profit he thinks there is in it, and then fill the hives with sugar syrup "dope" for them to live on through the winter.

I have always, with one or two ex-

ceptions, wintered my bees in the cellar. The cellar in which I winter them is under the house. It is 18x26 feet, with cement floor; the bee cellar proper is 12x18 feet. In that space I have at the present time 92 colonies. The remaining 11 are in the other part of the space.

All is ventilated with a 6-inch stove pipe entering the top of the wall on the south side connected with two elbows extending to the bottom of the cellar on the inside, and by a window under the vestibule and porch on the east side. That admits of a free circulation of fresh air without any undue exposure to the bees.

I have the 8 and 10 frame Langstroth portico hives and a few dovetailed ones, but for various reasons I like the Langstroth better.

The hives are ventilated by two 5/8-inch holes in the back of the lid and the open entrance. I have tried putting two thicknesses of gunny sack over the frames, thinking the draft might be too strong through the back and front of the hive, but I have not been able to discover any difference in the result.

As to the temperature of the cellar I have never given it any very serious thought, but try to keep it cool enough so that the bees are not uneasy. But to keep a thermometer in the cellar and then try to keep an even temperature is only subjecting the beekeeper to unnecessary trouble without any material benefit to the bees.

Madison, Wis.

### Sugar Syrup Feeding

BY J. E. HAND.

**C**REDIT is due to Editor Dadant, for compiling so much valuable information in the October American Bee Journal relative to the orthodox density of sugar syrup for feeding bees, for this is a matter of vital interest to beekeepers. It is gratifying to note that the majority favor a solution of two sugar to one of water; while adding my testimony in favor of this solution, I wish to sound a timely warning against the inordinate feeding of sugar syrup of any density and for



STRONG COLONIES IN A COUNTRY OF SHORT SUMMERS, CHARLESBOURG, QUEBEC



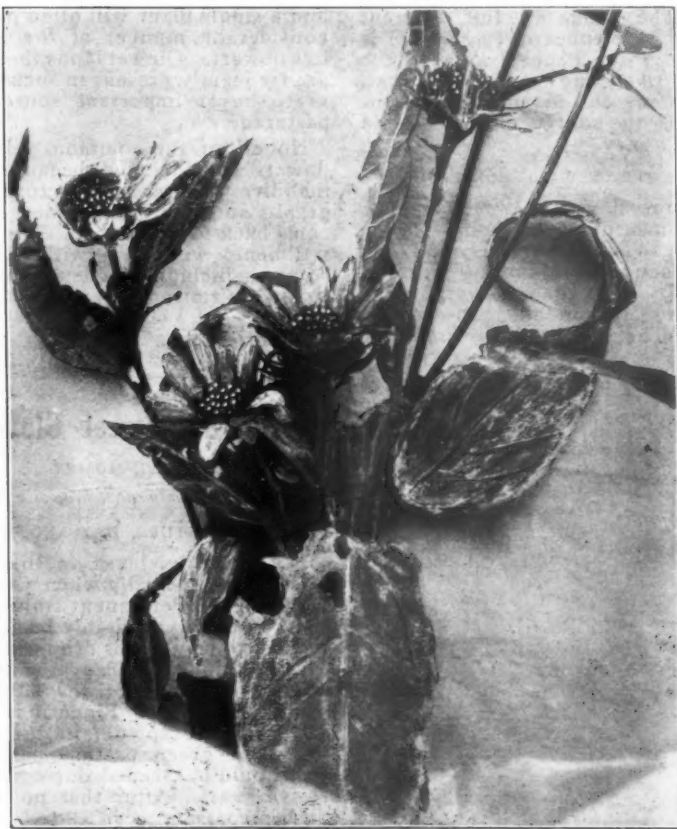


FIG. 5.—WILD SUNFLOWER

any purpose whatever except as a last resort to prevent starvation.

The pernicious practice of extracting all the honey and feeding syrup containing a heavy percentage of water is rank heresy in view of the incontrovertible fact that to expel the excessive water and invert it is the most devastating labor that bees can perform. Those wanting further light upon this subject should read the two articles on "Honey and Biology," pages 315 and 346, by J. A. Heberle, B. S., for these are cold hard facts from a scientific point of view.

Words of truth and wisdom emanating from such a reliable source cannot be lightly ignored, and Brother Heberle is deserving of thanks by American beekeepers for compiling so much valuable information of a scientific nature relative to the nature and food value of sugar syrup, as well as to the deleterious effect upon the bees that invert it. Perhaps few practical beekeepers in the United States have had a wider experience in feeding syrup of different density and for different purposes than myself, for personally conducted experiments along this line have consumed tons of sugar, and sacrificed the vitality and lives of hundreds of colonies of healthy bees.

While the inversion of cane sugar is undoubtedly fraught with evil consequences to bees, these influences are trivial in comparison with the lost vitality and premature death of bees when compelled to expel excessive water imperfectly diffused with sugar, by a process erroneously called "evaporation;" "evaporation" performs no

part in the process of expelling water from syrup or nectar. It is gratifying to note that progressive beekeepers of today do not advocate stimulative feeding, and for the good of the industry there should be less sugar fed for winter stores. As a result for expensive

and extensive experiments we have no use for feeding except as a last resort when honey is not in evidence; hence, we have an iron-clad rule to leave at least six of the best filled combs on every hive for winter stores, for in our location the brood-chamber cannot be relied upon when running for extracted honey, and we realize a greater profit from those combs than can be realized in any market in the world.

Birmingham, Ohio.

## No. 2.—The Honey-Producing Plants—"Yellow Fall Flowers"

BY FRANK C. PELLETT.

WILD SUNFLOWER (*HELIANTHUS*.)

**T**HERE are many species of the sunflowers, some of which may be found from the Atlantic Coast to California, and from Canada to the gulf. They are tall coarse weeds with bright yellow flowers. Large numbers of insects of many species may be found on the sunflower blossoms, in search of the nectar. Wherever these plants are sufficiently abundant, they are the source of large quantities of honey. The cultivated sunflowers are of little if any value as honey plants, but produce seed in large quantity, which is a valuable poultry food. The Jerusalem artichoke is a variety of sunflower, cultivated for the tubers, to feed the hogs. This plant grows wild in the upper Mississippi Valley States, and is commonly regarded as a weed. It is frequently referred to as a valuable honey plant.

Many of the wild sunflowers are perennials, persisting for many years when once established. They are commonly to be seen along wagon roads and railroads and on waste



FIG. 6.—BEE FLY ON WILD SUNFLOWER BLOSSOM



# American Bee Journal

ground everywhere. While the artichokes are troublesome weeds in the fields, they are seldom sufficiently abundant excepting on waste land to be of importance as a honey plant.

## CROWNBEARD.

There are several species of crownbeard, some of which have white blossoms. The pictures show the common, yellow flowered variety, of Iowa. It grows in the borders of open woods and other partially shaded situations. The bees seek it very eagerly, and a great humming is in evidence about this plant, when the bloom is at its

height. The range of the different species of crownbeard (*verbesina*) is said to be from Pennsylvania to the Missouri river, and south to Texas. Wherever present in sufficient abundance, it is the source of a desirable quality of honey.

## CONE FLOWER OR WILD GOLDEN GLOW

The cone flowers (*Rudbeckia*) are not often mentioned as honey plants, yet the bees visit them freely and apparently they are the source of some nectar. In Iowa they are very common on low ground and grow 4 to 8 feet high. The stem has many branches

and a single plant will often produce a considerable number of the large yellow flowers. On wet lands these plants are frequently present in such quantity as to be an important source of bee pasturage.

Not all of the common yellow fall flowers are included because of our inability to get satisfactory photographs so that it will be necessary to come back to them later. The next installment will deal with other fall flowers, including asters, snakeroot, etc.—COPYRIGHT 1915, BY FRANK C. PELLET.

Atlantic, Iowa.



FIG. 7.—WILD SUNFLOWERS WITH OTHER PLANTS BY THE ROADSIDE

## No. 2.—Sweet Clover

BY J. G. MOSIER.

Agricultural Department, University of Illinois

USES, PASTURE, HAY AND SEED.

**S**TOCK easily learn to like sweet clover, especially when young and tender. Permanent blue grass pastures could profitably be seeded to sweet clover since this crop will furnish plant food for the blue grass and result in growing more of the latter than without the clover. Since it is a biennial, in order to obtain the largest amount of green pasture part of the field should be seeded during two successive years. After that no seeding will be necessary.

For temporary pastures sweet clover should be seeded with some other crop such as red, alsike clover or timothy, to furnish pasture after the sweet clover has seeded the second year. But little will be eaten after it blooms and becomes woody. The pasture season may be prolonged by clipping it with a mower 5 or 6 inches high sometime before blooming. This starts a new succulent growth that will afford pasture much longer. The value of sweet



FIG. 8.—CROWNBEARD



FIG. 9.—FLOWER AND LEAF OF YELLOW CROWNBEARD



FIG. 10—YELLOW CONE FLOWER OR GOLDEN GLOW

clover is being demonstrated on many farms and some experiment stations. The Iowa station has carried on some experiments, using sweet clover as pasture for hogs and the first season's growth has proved to be about as good as alfalfa.

The following extract from a letter will show how cattle thrive on this much abused plant: "I had a very fine stand this season following a barley crop. Sixty days after cutting the barley, there was a growth of from 15 to 24 inches, I put 29 steers in this field that were just common feeders in only fairly good condition, purchased in Kansas City. They were fed nothing else, but had plenty of water and salt, and in 55 days the average gain was 154 pounds each."

The Wyoming Experiment Station found that lambs fed on alfalfa made an average gain of 34.4 pounds each in 14 weeks, while on sweet clover another bunch of lambs made a gain of 30.7 pounds for the same time.

As a hay crop, sweet clover is proving very valuable. Stock eat it when cured as well as when green. During favorable seasons a hay crop of a ton or more may be cut the first year. One man writes me that his first year's growth made  $2\frac{1}{2}$  tons of hay. A crop of hay may be cut during the second year and the second crop allowed to seed or the first crop may be allowed to seed. In cutting the hay crop during the first season's growth, there is no danger of injuring by cutting too low, but for cuttings made during the second year, the mower should be run at least 4 inches high. New buds or sprouts do not start from the root crown as in the case of alfalfa after being cut once. The new growths start from the stubble, and this must be left sufficiently high to give room for the new buds. The root crown normally furnishes but one series of

shoots, and if cut too low the second crop will be a partial or total failure. There will be no objection to cutting a second crop of hay if sufficient growth takes place. This will damage the seed crop, however.

Cut the first crop before it blooms and the second crop before it becomes too woody.

Mr. Graham, of Rochelle, filled a silo with the first year's growth of sweet clover, and fed it to steers together with corn. During the first 30 days an average gain was made of 90 pounds per steer.

The yield of sweet clover seed is usually higher than that of any other clover, being from 3 to 16 bushels per acre, and may be obtained from the first, second or possibly a small yield from the third crop if the season is favorable. To obtain the best seed crop it is necessary to cut a crop of hay or clip it when 18 or 20 inches high. In handling the seed crop it can best be done by harvesting with a binder and shocking as in the case of oats. The time of cutting for the seed is very important, since if cut when too ripe much will be lost by shattering. A general rule is to cut it when three-fourths of the seeds are black and the rest a yellow brown. The seed ripens very irregularly, and some branches will be in bloom when others are ready to harvest. It should be hulled as soon as dry. The ordinary clover huller does not handle sweet clover very satisfactorily. If possible, use a thrasher with a clover hulling attachment. Probably the best way, until the hullers are adapted to handling this crop, is to run the crop through an ordinary huller. This will give the seed in good shape.

#### SWEET CLOVER AS A SOIL RENOVATING CROP.

As a crop for soil improvement



FIG. 11—FLOWER AND LEAF OF YELLOW CONE FLOWER.

sweet clover promises to become of great value especially in our systems of grain and mixed farming, and possibly in the live stock system. It has this advantage over alfalfa that it works well into systems of rotation and could be turned under with a clear conscience. With the exception of alfalfa it is the deepest root crop grown, the tap roots penetrating to a depth of 3 to 5 feet. This makes it especially valuable as a subsoiler. The root development takes place largely during the first season. The growth of top during the first year is not usually very large, probably not much larger than the total root development during the same time.

The growth of top during the second year is one feature that makes it such an excellent crop for soil improvement. One of the most important problems in soil management is maintaining the supply of nitrogenous organic matter to provide nitrogen for the crop and humus for keeping the soil in good tilth. Sweet clover provides an abundance of both.

The following table gives the results of some investigations of sweet clover at the Illinois Agricultural Experiment Station:

#### ILLINOIS INVESTIGATIONS OF SWEET CLOVER (M. ALBA).

Parts of plant depth	Dry matter pounds	per acre percent of total	Nitrogen pounds percent of total	per acre percent of total
Tops harvested...	9020		174	
Surface residue...	1338		23	
Total tops.....	10357	81	197	86
Large surface roots, 0 to 7 in....	1568		17	
Small surface roots, 0 to 7 in....	241		5	
Total surface, 0 to 7 in.....	1809	14	22	10
Subsurface roots, 7 to 20 in.....	601	5	6	4
Total roots.....	2410	19	31	14
Total tops and roots.....	12777	100	228	100

Table from Dr. Hopkins' "Soil Fertility and Permanent Agriculture."

The total yield in the above is 6.4 tons of dry matter per acre of which the roots form 1.2 tons per acre, or less than one-fifth of the total. It is important to note that the tops are nearly as rich in nitrogen as red clover (40 pounds per ton), while the roots



# American Bee Journal

contain only about 26 pounds of nitrogen per ton, or tops and roots contain respectively 86 and 14 percent of the total nitrogen of the entire plant. The above indicates that sweet clover may be made a very valuable crop for soil improvement if properly managed. A large part of the crop should be turned back into the soil. If the entire crop is removed not only will no nitrogen be added to the soil, but since the plant takes approximately one-third or 33 percent of its nitrogen from the ordinary brown silt loam soil as determined by another experiment, the nitrogen content of this soil would actually be reduced.

At the Wyoming Experiment Station in 1905, two plots produced from two cuttings about 4.5 tons of hay per acre—from two other plots 3.75 tons were secured.

During the present year, with a deficiency of 8.3 inches of rainfall from March 1 to Sept. 1, the sweet clover produced on my own farm an average yield of organic matter of 3.6 tons per acre.

The above yields will give some idea of the value of this plant for adding matter and nitrogen to the soil. This will undoubtedly be its primary function in our systems of agriculture. If a secondary use can be made of it for hay and pasture so much the better. If, however, everything is removed, sweet clover in the hands of a selfish farmer may become one of the worst soil robbers.

Very few definite experiments have been published that give the actual value of sweet clover in increased yields of succeeding crops. The following yields were obtained near Tost, Germany, as given in Ohio Experiment Station Bulletin No. 244. Sweet clover was seeded in May and turned under the next year as a green manure:

Soil treatment	Oats per acre, bushels	Potatoes per acre, bushels
No green manure	34.3	123.6
Green manure	51.4	258.9

The question is often asked regarding the difficulty of plowing sweet clover ground as compared to alfalfa sod. The plowing is very difficult the first season, but if left until the crop is mature the roots soon begin to decay and may then be cut readily with the plowshare. The decay of these roots leaves the soil in fine physical condition.

## DROUTH RESISTANCE.

Sweet clover is a better drouth resistant than any other clover. On three fields that had both red and sweet clover seeded side by side, the latter has maintained itself during the dry season of 1913 and made a good stand, while the red clover was a total failure. The same was true in 1914. It is matter of common observation that sweet clover along the roadside will be green when blue grass in the pasture is dry. Probably no crop but alfalfa is a better drouth resistant than sweet clover.

One of the objections frequently spoken of by farmers is the liability of sweet clover becoming a serious weed pest if introduced into our cultivated fields. This danger has been magnified to a considerable degree. I have

written to dozens of men who have grown sweet clover more or less, asking them about this very point, and the answers have been unanimously in favor of sweet clover. It may do a small amount of damage to oats or wheat, but this injury will be much more than counterbalanced by the good that it does to the soil. Sweet clover may be used primarily as a soil improver, and when farmers are growing it, as they will in the near future, the price of clover seed will be reduced to the point where land owners will not hesitate to furnish the seed.

Champaign, Ill.

## European Foulbrood

BY PAUL SCHEURING.

(Read at the Wisconsin Meeting.)

I HAVE been asked to tell what I know about European foulbrood. It is a very undesirable thing to have, and very, very difficult to get rid of in a large apiary. A few years ago when I first discovered it in my apiary, I promptly burned all the bees, combs and frames of all affected colonies, and wrote to our State bee inspector, Mr. France. He told me that killing the queen and giving them a new queen would cure the disease.

This advice was of great benefit to me, but this will not always effect a permanent cure, although it certainly checks the disease. That the bees will sometimes supersede their queen and thereby cure it I have ample proof, especially in early spring.

In the fall of 1913 I found three affected colonies. I took away all of their combs and gave them combs of honey from good healthy colonies. This was done in the forepart of November, after all the breeding had ceased. Up to the middle of October,

1914, there was no sign of the disease in these colonies, and this with no change of queens. There is no guesswork about the queens, as I clip all of mine. On the other hand, I have taken the queen from an affected colony and put her in a queenless colony in the breeding season, and the disease was evidently carried by the queen. I burned these colonies later.

My guess, or at least one that is, the disease is spread by the nurse bees when they have a general flight, and on their return go into the wrong hive. This, in my opinion, occurs far oftener than is generally supposed. Of course, there may be other ways of spreading the disease, but until our scientific men find out for sure how it is spread, we are certainly "up a stump," and must do the best we can. We may effect a real cure of a colony and later it may get the disease in some unknown way. We quite naturally conclude the cure was not completed; although a neighbor beekeeper may have lost all of his bees by the disease; possibly one, two, or three miles away there may be a number of colonies in the cornices of houses, old hollow trees and other places too numerous to mention. From any of these sources the bees might get the disease. If a beekeeper keeps a close watch of his bees as he ought, there is no reason why he should lose a whole apiary.

West De Pere, Wis.

## Candied Honey

BY ADRIAN GETAZ.

AN experience with which I met four years ago may be very useful to some beekeepers just at this time of the year. Many have trouble with their honey turning into "sugar" or

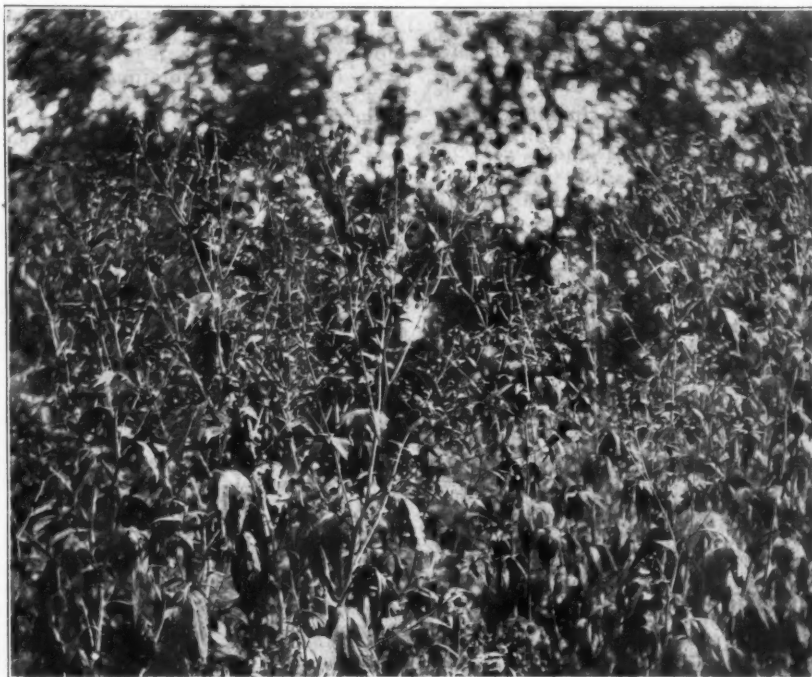


FIG. 12.—CLUMP OF YELLOW CONE FLOWERS BY RIVERSIDE



# American Bee Journal

rather crystallizing — "candyng" is the word generally used. It is well known that the honey gathered during the summer seldom candies, while that from the fall flowers does almost invariably. There is undoubtedly some difference between the honeys produced by different kinds of flowers. Also the honey left on the hives during summer until fully ripe seldom candies. Extracted honey is more liable to candy than comb honey.

In this locality there is usually enough honey in the late fall to keep up the bees during the winter, but seldom enough to furnish a surplus. Four years ago there was an exception. Quite a surplus was obtained in one of my apiaries situated where the golden-rods and asters are plentiful. I put on plenty of sections so that the bees would not be cramped for room. The cold weather came suddenly when the sections were only half full. There was nothing to do but to cut the honey out and put it in lard cans. Of course, a portion of the honey ran out of the combs, so that the contents of the cans were the equivalent of a mixture of comb and extracted honey.

I had for a neighbor a man who made a specialty of selling fresh vegetables, eggs, butter, etc., directly to consumers. He bought this honey. I directed him to keep it in a warm dry place and sell it as soon as possible. That apiary is quite a distance from home, and the road, or at least a portion of it, is quite bad. I did not go there until the early spring, and then inquired about the honey. I had

agreed to replace what might candy on his hands. To my surprise none had candied. What he had yet was thick, well ripened honey, as good as I have ever seen. He had kept it in "the little room in the attic."

The kitchen in that house is quite large, and in winter time at least is used also as a dining room and family room. The only heating is by a large cooking range. This has a large stove-pipe which goes through the ceiling through "the little room in the attic" and ends in the flue above the roof. The man had to be up at 1 or 2 o'clock in the morning, in the days he went to town. That meant an almost continuous fire through the whole winter. The cans of honey had been placed around the stove-pipe.

We have here three following facts:

1. The honey gathered in the early part of the summer and exposed to the warm weather during two or three months rarely candies.

2. The fall honey, exposed to the cold weather almost immediately after being gathered, usually candies.

3. The fall honey kept throughout the whole winter at a high temperature in "the little room in the attic" not only did not candy but ripened unusually well.

I have not had any fall surplus since then, and therefore have not been able to repeat the experiment. I presume that where there is a furnace in the house, the furnace room would be the best substitute for "the little room in the attic."

Knoxville, Tenn.

them are dead or dying. One day while the snow was on the ground I saw dead bees on the snow. While I was there a bee came flying out of the hive, lit on the snow and was frozen; it was zero weather. I have a box set over the hive; the front side is open. They are not packed. The entrance of the hive is wide open, and they have plenty of honey to winter on with nothing to disturb them. They are Italian bees.

2. What is the best bee for this country, the Buckeye strain, 3-banded, golden Italian or leather colored?

3. How can I tell a queen-cell from all the rest?

4. What is the best way to introduce a valuable queen?

OHIO.

ANSWERS.—1. There may be nothing wrong at all; depends upon what is meant by "quite a number." In a strong colony it is nothing strange if a thousand bees die off in the course of the winter; and when the sun is shining upon the white snow it is nothing alarming to see a bee fly out to meet its death in the snow.

2. There are good bees of almost all kinds; the majority of beekeepers probably prefer the 3-banded Italians.

3. Get a good bee-book; you need one anyhow, and in it you will have a picture of a queen-cell which will teach you to recognize it easily. Still you will not have much trouble in telling one when you see it. It is entirely different from worker-cells or drone-cells, which are alike except as to size. If you find a big cell that looks a good bit like a peanut, you may know that it is a sealed queen-cell. When it is first begun it looks something like an acorn cup.

4. With a very valuable queen, if you want to be entirely safe, proceed in this way: Put two, three, or more frames of brood in an upper story over a strong colony, having a queen-excluder between the two stories. In about eight days all the brood will be sealed. Now lift the upper story, take away the excluder, and cover the hive with wire cloth, which will not admit the passage of a bee. Over the wire cloth set an empty hive-body. One by one lift the frames out of the removed upper story, brushing off upon the ground in front of the hive all the bees from each comb, and putting the brushed combs into the empty upper story. Put your new queen into this upper story and cover up, making very sure that not a bee can get in or out. Your queen is now alone in this upper story, but will probably have company within five minutes, for young bees will be hatching out constantly from the sealed brood. No bee can get from one story to the other, but the heat can rise from below to keep the upper story warm. In about five days you can set this upper story on a new stand, giving it entrance for only one bee at a time. If your bees act as mine have done, and the circumstances are favorable, before night you will see some of the 5 day old bees entering the hive with pollen on their legs.

## Wintering Two Queens In One Hive

How can I winter two queens in one hive and have the bees run together?

ILLINOIS.

ANSWER.—I don't know, having never tried it.

## Candied Honey as Feed—Where Does Wax Come From?

1. Since as it would seem no established beekeeper produces enough wax to work into his necessary foundation, where does the surplus come from?

2. Why is it that hard sugar candy is used as winter feed while the candyng of honey in the hive is deplored? Why not feed candied honey over the cluster when needed?

3. Have you ever had one or more colonies

# DR. MILLER'S



# ANSWERS

Send Questions either to the office of the American Bee Journal or direct to  
DR. C. C. MILLER, MARENGO, ILL.  
He does NOT answer bee-keeping questions by mail.

## Frames and Honey from American Foulbrood Colonies

I have 40 colonies of bees with American foulbrood. I would like to treat them in the spring. Would it be safe to treat them the foulbrood honey after melting the combs or would I have to boil it? Would it be safe to use the frames again after boiling and cleaning them.

WYOMING.

ANSWERS.—You must boil it. If you boil it without any water, the outer part may burn while the center is not heated enough to make it safe. So add water, perhaps half as much water as honey, slowly heating at first until all is thoroughly melted, and then bring it to a boil and keep it there for at least 15 minutes. Even then some think it unwise to feed such honey.

The frames may be used again if thoroughly boiled.

## Melting Combs in European Foulbrood

You state you will never melt up any more combs on account of European foulbrood. What would you do with combs partly filled with honey and empty, that were left by a colony that had died with the disease?

KANSAS.

ANSWER.—Candidly, I must confess I don't know. As you state the case, I can imagine a colony so thoroughly rotten with the dis-

ease that it dies outright, leaving combs containing some honey, but most of the cells filled with diseased and dead brood. If I had such a case I should feel a good deal like burning up the whole thing. I'm pretty certain I should if it were the only diseased colony in the apiary. If the disease were spread throughout the apiary, I think I would let such bad combs dry until the dead larvae were dry. Then if there was honey in some of the combs that I thought fit for table use, I might extract it. Whether the combs were extracted or not, I might give them in an upper story to some colony having the disease but not badly affected. In fact, this latter is just what I do, piling the diseased combs four or five stories high — only the combs were not so badly diseased as in the supposed case.

Even while saying that with a single case in the apiary so bad as imagined, I should burn up the whole thing. I still stand by my assertion that I will never melt up any more combs on account of European foulbrood, because I am very sure I'll never allow a case to get so bad as supposed.

## Bees Dying—Strains of Bees—Introducing

1. What ails my bees? Quite a number of

# American Bee Journal

allow the queen to dwindle and disappear without an effort to supersede? How do you explain such occurrence? COLORADO.

ANSWERS.—1. "Things are not what they seem;" at least not always. An established beekeeper may not produce enough wax for his own foundation, and again he may. If he works for extracted honey, and has reached the point where he makes no more increase and needs no more combs, he may have a surplus of wax from his cappings, and probably will have. Even if he renews his combs, the melted combs should furnish wax for the new ones. Upon him the comb-honey man may depend for his wax. There are always more or less beekeepers who use little or no foundation, and such men are likely to produce surplus wax by means of the combs they melt up from the deceased colonies.

2. Your question is hardly a fair one, for it sounds like saying that there is no objection to feeding candy, while there is objection to letting the bees have candied honey. The fact is that there are good authorities who deplore the feeding of sugar candy more than the candying of honey. There is, however, not so much said against the feeding of sugar candy, because it is often a choice between that and starvation, in which case the feeding of candy is not a thing to be deplored. In the case of honey candying, it is to be deplored because it is not so good as liquid honey. It remains, however, to say that it is quite possible that it is better to feed candied honey than to feed sugar candy, and that so good authorities as the Dadants have practiced feeding candied honey. Perhaps ye Editor will tell us about it in a bracket. [Sugar may be *crystallized* in lumps like rock candy, in which case it is of no use to the bees. But soft candy makes good bee food. The same may be said of granulated honey. If the honey has granulated in a way that there are hard, crusty lumps in it, some of it may be lost by the bees, especially if they attempt to consume it in dry weather. When the atmosphere is loaded with moisture, much of this softens so the bees can use it. But well ripened honey which has a soft granulation will be consumed to the last mite. We have very often fed candied honey in the way suggested by our correspondent.—C. P. D.]

3. I don't remember that I ever had such an experience, and have no explanation for it.

## Questions from England

1. I would like to know that part of California where the largest apiaries are, as I hope to be traveling over there before long. I should like, if possible, to call on one or two.

2. Is North Carolina a good State for beekeeping, and, if so, what part?

3. Do bees have to be taken into a cellar for winter? ENGLAND.

ANSWERS.—1. I think North Carolina averages fairly well in beekeeping, but cannot give information as to different localities. In no part of the State is it necessary to cellar bees.—[Answer to the first question is referred to our California correspondent for reply.—EDITOR.]

## Queen Introduction

What difference, if any, is there about acceptance of a queen in a colony that has been queenless for some time (no laying worker), and in case of increase by division of a colony, as to queen given to the queenless part? PENNSYLVANIA.

ANSWER.—Introduction would be quite a bit more likely to be successful in the second than the first case. It is generally found

that it is more difficult to introduce a queen to a colony that has been queenless for some time than to one from which the queen has been recently removed. The reason may be because of the age of the bees, for it is the older bees that make trouble when a new ruler is introduced.

## Eight Frames Sufficient—Requeening

1. Are eight Langstroth frames full of honey enough to winter a strong colony of bees out-of-doors? I pack in leaves, three in a shed, 6 inches of space between each hive.

2. Black queens are very hard to find without using an excluder. Would you recommend requeening by the Hand method described in Gleanings in Bee Culture some time ago? IOWA.

ANSWERS.—1. Yes, less than eight frames; six would do if well filled.

2. As I don't know just where to look "awhile back," I don't recall the exact method of introduction, but as Mr. Hand is an experienced beekeeper, the plan is doubtless all right.

## "Put Up" Plan

Last year I tried the excluder plan in treating colonies, but in two out of three colonies so treated I found that the bees started cells in the upper hives, but I cut out all cells but one before I set the old hive down and killed the old queen (that is if she was not a desirable one). All colonies treated this way did not swarm that season. I think it is a good plan. I shall try the "put up" plan next season, and the de-queening plan also.

What would you say to this way of treating swarms that are "put up"? Give a frame of young brood from my best queen in the lower hive, and let the bees rear a young queen from this frame of brood; of course destroying all cells but one, then after the young queen starts to laying, kill the old queen in the upper hive before putting the hive on its original stand. I will kill the old queen if she is not desirable. (Of course, I will save all cells from the best queen if possible.) SUBSCRIBER.

ANSWER.—I see no reason why the plan should not work; but I have never tried exactly that plan, and sometimes a plan that looks all right will turn out all wrong because of some little kink we had not thought of. The only way to be sure about any new plan is to submit it to the bees for their approval. Even then we are not always sure

from a single trial. A different season or different circumstances may give different results.

## Packing Bees—Opening the Hive in Winter—Uniting

1. I have a colony of bees that I have left outside with a box cover packed with leaves. They have nothing over the brood frames, but are wintering finely. Does it hurt the bees much to open the hive in cold weather?

2. Is it necessary to have a covering over the brood-frame when it is packed to the top and protected from the wind?

3. What is your best plan for uniting a weak colony with a stronger one? MICHIGAN.

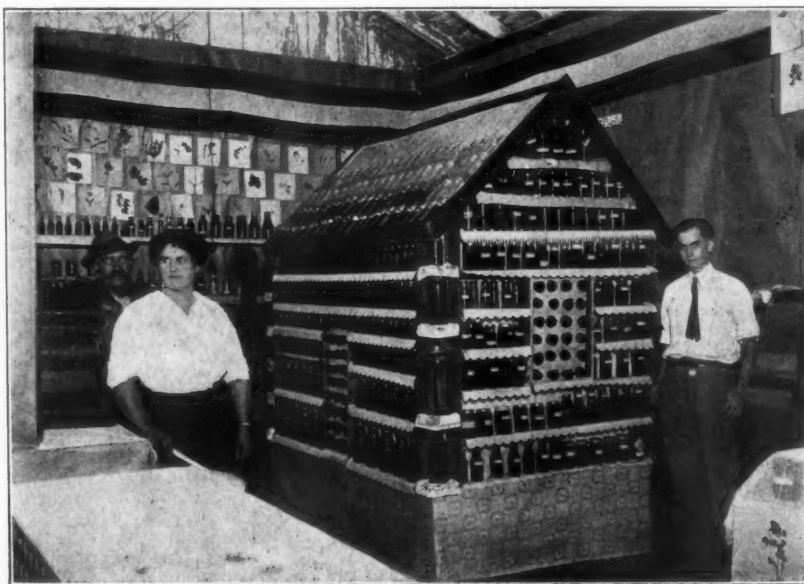
ANSWERS.—1. Sometimes it does a great deal of harm, even to the death of the colony, to open a hive and disturb the bees when it is too cold for them to fly. When it is warm enough for them to fly it may do little or no harm; but when very cold better not disturb them unless there is danger of starvation.

2. That depends upon the kind of packing. One object of the covering is to support the packing, and if the packing be something like chaff that would sift down among the bees, then some kind of covering over the frames is very important. But if the packing be something in the nature of cloth or old carpets, then it matters little.

3. Generally there is nothing better than the newspaper plan. Put a sheet of newspaper over the top-bars of the strong colony and set over it the hive containing the weaker colony, with no chance for the bees to get out of the upper hive until a hole is gnawed in the paper. After a few days the frames of brood in the upper story may be moved into the lower story. When bees are not flying daily, there is little trouble in uniting by merely placing the frames of brood and bees from the weak colony beside those of the stronger.

## Eight-Frame Hives for Extracting

With regard to the query concerning "Large Hives" in No. 1 of the American Bee Journal, I will say that in my opinion and according to my experience, I take the 8-frame hive for an ideal hive for extracting. With these hive-bodies I can give the bees all the room they need as well as with the



J. P. LUCAS' EXHIBIT AT KANSAS STATE FAIR



# American Bee Journal

10-frame hive. At any time in spring when the bees cover their combs well, I add another hive-body with combs, and I continue to do this as often as they need more room. During the last season I had colonies with four hive-bodies, just boiling over with bees, with hardly any swarms. These hive-bodies were all filled with honey and brood.

In running for extracted honey, I put 30 combs (Langstroth size) in these four hive-bodies, which is equal, or a trifle larger, than three 10-frame hive-bodies. As a rule, this is sufficient here. If anybody finds that his bees need more space, let him add a fifth story. For comb honey, of course, this procedure is entirely out of question.

As this way of using a small hive and yet having big colonies of bees, works so well here I would advise those who contemplate introducing larger hives to try this way. When the warm season sets in give plenty of ventilation by boring a hole in the upper story and sometimes by putting three-sixteenths inch thick blocks between the supers, and by enlarging the flight hole from  $\frac{1}{2}$  to  $\frac{3}{4}$  inches by 12 inches.

INDIANA.

ANSWER.—I know that 8-frame hives can be used as you say, for I have used them so for years, although piling up only a few of them in the way you mention. Even when working for comb honey, I use two stories whenever needed before the harvest, and can have just as strong colonies as with 10-frame hives. But when they ask us, "Couldn't you get just as strong colonies in larger hives?" I'm obliged to answer that I could. And are you sure you couldn't get just as much extracted honey with the larger hives? The main advantage of the smaller hives is that they cost less and are lighter to handle; but with most beekeepers that would not balance the advantage that with the larger hives there is less danger of starving in winter.

In order to secure ventilation, instead of boring holes or wedging up, I prefer to shove the stories backward or forward.

## Hive-Bodies, Shallow Frames, Etc.

1. In your answer to "Missouri," page 422, you say that hives should be 10 inches deep inside. Does that include the  $\frac{1}{2}$  inch or more that the bodies are raised above the bottom-boards by the cleats or edges on which the hives rest? I have some nice lumber  $\frac{3}{4}$  inches wide. Would this do? It is for the hive-bodies proper. Or should it be cut down to  $\frac{9}{16}$  inches, the regulative hive depth?

2. Will partly filled sections do for fall feeding in place of sugar? Would they keep until next year if properly cared for?

3. How would it do to put about four shallow extracting frames in a super and fill the rest of the space with sections?

4. How can I extract the honey from a few shallow frames occasionally without an extractor, and save the combs for future use?

5. Are shallow frames usually wired?

6. Are starters or full sheets of foundation put into frames every time the full combs are cut out when running for chunk honey?

PENNSYLVANIA.

ANSWERS.—That statement that the depth of a hive-body is 10 inches is inexcusably careless, and I am very much ashamed of it. It is true that some hives are made that depth, and for one who uses section supers or shallow extracting supers, 10 inches will work all right. But there are likely to be times when one wants to use a hive body as an upper story, and then the case is different. Suppose we figure a little. The Langstroth frame is  $\frac{9}{16}$  inches deep. Allow the bottom-bars to be flush with the bottom of the hive, and there must be a space of  $\frac{1}{4}$  inch above the top-bar so as to leave a  $\frac{1}{4}$ -inch space between the top-bars of the lower story and the bottom-bars of the second story, in case we want to use a hive-body for a second story. Add that  $\frac{1}{4}$ -inch to the  $\frac{9}{16}$  inches, and we have  $\frac{13}{16}$  inches as the ideal depth for a hive-body. That's all right when everything is entirely new and

clean. But they will stay neither new nor clean. Even well seasoned stuff is likely to shrink a little in the course of years, and there will be over top-bars and under bottom-bars accumulations of wax and propolis, making the space between the two stories a good bit less than the original  $\frac{1}{4}$  inch. Then the bees will be sure to glue the top-bars of the lower story to the bottom-bars that are over them. So it will be a safe thing to make the hive-body never less than  $\frac{9}{16}$  inches even with the best seasoned lumber, and the probability is that you will have no trouble if you use your  $\frac{3}{4}$  inch lumber without cutting down. But 10 inches would be a little too generous allowance for shrinkage and accumulations.

2. They will do nicely for fall feeding, and will keep well for use the next year or for five years later, after the bees have cleaned

them out in the fall. But unless the honey is thus cleaned out in the fall, it is not likely you can keep them so as to be used the next year.

3. It will work all right, but you must expect the bees to fill the extracting combs in advance of the sections generally.

4. I don't know how you can do it, unless you do as von Hruschka's boy did at the time his father invented the extractor. Take a pail large enough so you can lay the frame flat on the bottom, tie a string to the bale and whirl the pail about your head.

5. Unless rather heavy foundation be used, it is better to wire.

6. Some use full sheets, some use starters, and some use neither, when the comb is cut out leaving enough of the comb under the top-bar to serve as a starter.

## REPORTS AND EXPERIENCES

### Advertising Bees and Honey Without Expense

Beekeepers, as a rule, do not realize what an advantage they have in the way of securing free advertisement; not only free, but, if properly managed, one can get pay for advertising his own business. We beekeepers study the mysteries of the bees, and discuss them among ourselves through the medium of the bee journals until to us they are commonplace. The rank and file of the honey consumers never get to know of the marvelous things of interest concerning the bee and its works. It is "up to us" to give them, through the newspapers and magazines, live, interesting sketches of the bee and honey industry. They like anything unique, original, and interesting to the public.

Of course, a person must not give the arti-

cles the appearance of advertising or it will "queer the game." It is not necessary to say that you have honey or bees to sell. If you have bees they will know that you have honey. I have frequently noticed the surprise of people when I tell them that I produced a ton of honey. The word "ton" seems much bigger when applied to honey than does 2000 pounds. So does "half a ton" or a "quarter ton." It probably seems big to them because they were familiar with it only in spoonful lots when used to cure colds. Then, again, the public cannot get away from the belief that the principal business of the bee is to sting; that the sting is something awful, and that, if you go near a hive of bees you are taking your life in your hands. Some of the common "stunts" that are pulled off among the beekeepers would amaze the public. L. N. GRAVELY, Ringgold, Va.

### Does Sweet Clover Bloat Cattle?

A writer in the American Bee Journal claims that sweet clover bloats cattle. I have read very much about this plant, but I have only once heard that cattle happened to die of it. In this case they ate it so greedily that the quantity, but not the quality, of the green clover killed them. Excess is always hurtful, no matter how good a thing may be in itself. I hope to get some information through the readers of the American Bee Journal. SUBSCRIBER, Spencer Co., Ind.

### Bad in Illinois

Beekeeping in my locality has been very bad for the last three years. I did not sell a case of honey for two years; the bees just made a living, and sometimes not that. Last year we did not get any rain from spring until September, so you know that there was no honey. HERMAN GEIER, Morton, Ill., Jan. 18.

### Wintering Finely

My bees are wintering finely. I believe this will be a good honey year. I am getting everything ready for it. F. LEE, Cokato, Minn.

### Notes from a Queen-Breeder

I find that a colony that supersedes in early spring is a blank through the season so far as honey is concerned; but when they have their own way they usually supersede at a time when it will hurt them the least.

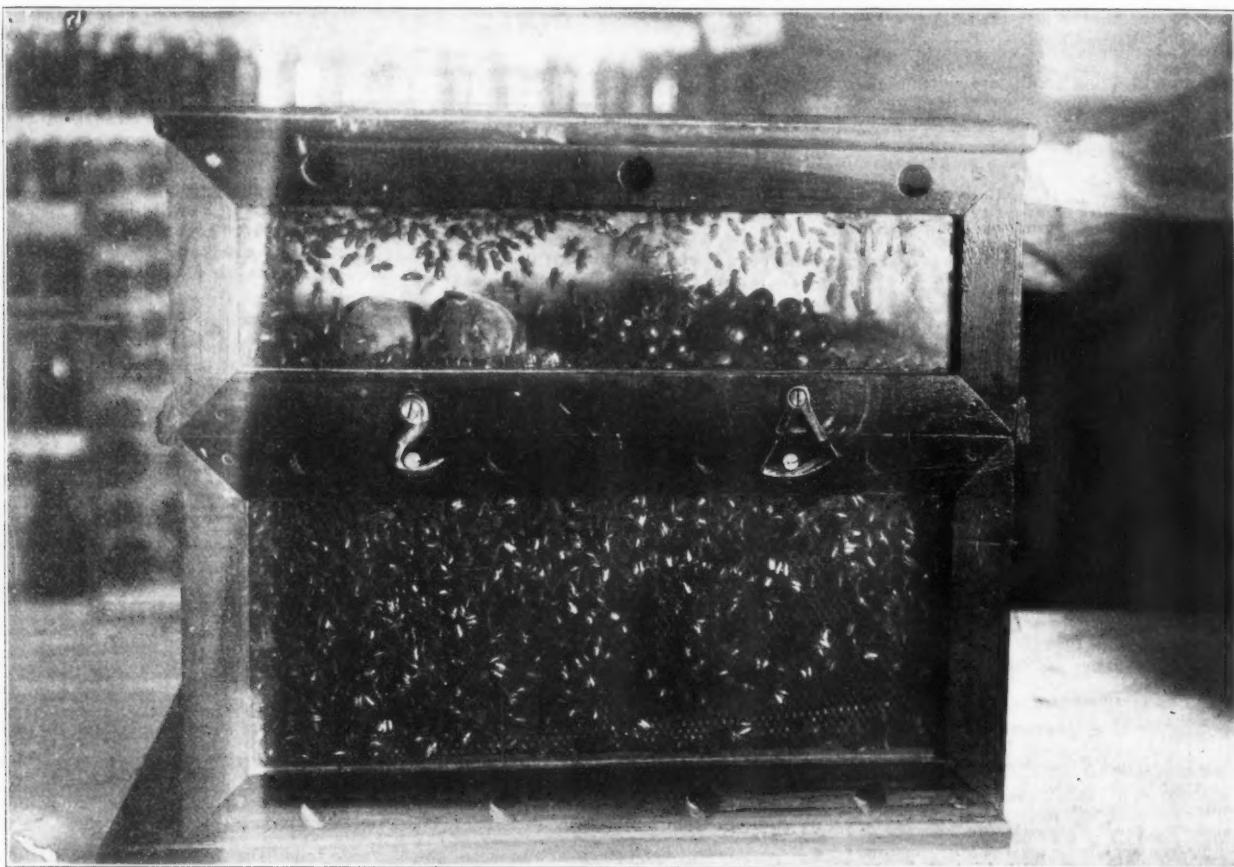
About 20 years ago there was a late freeze. It came as the poplar began blooming, and my queens were all laying, and had their hives almost full of brood. After the weather warmed up again they were about



A NEW PLACE FOR A SWARM, THE CHEST OF L. N. GRAVELY, OF RINGGOLD, VA.



# American Bee Journal



METHOD USED BY J. P. LUCAS AT THE FAIR TO SHOW THAT BEES CANNOT PUNCTURE SOUND FRUIT

half missing; so it appears to me that hard spring weather has a bad effect on queens when they are laying to almost their full capacity. It matters not so much how bad or cold it is when they are not laying. They will not be injured as if full of eggs at the time. I have had queens to do good work the fourth year. I usually let the bees do their own superseding unless the queen is bad or her bees undesirable in some respect. I never replace a queen just because she has attained a certain age.

I believe that a queen wintered in a very small colony and left to run short of stores will very often be injured and almost worthless thereafter; while if she had been in a strong colony with plenty of honey she would have been good.

Cosby, Tenn.

R. A. SHULTS.

## Honey Crop a Failure

The honey crop in these parts this past year was a failure, many not getting nectar enough to winter through.

From ten colonies, spring count, I got about 100 pounds; but think that two will not winter through, as I have no time to feed them. The others bid fair to come along all right. I winter outdoors in an open shed, with double walled hives. I increased four swarms by natural swarming the past season.

Richelieu, Nebr.

W. D. STAMBAUGH.

## Exhibited at Kansas Fair

I am sending some pictures; they are part of my display at the Kansas Fair. I have 24 different kinds of honey, which make a nice display. It is quite interesting to many to know honey is gathered from so many different sources. I tried to show the people that bees did not destroy fruit. I made a hive as nearly as I could of glass and put a full colony of bees into it, and in the supers I put in peaches and grapes, as you can see. I kept them thus through the fair a week, nearly two weeks in a show window, and the fruit was not molested.

Next year I shall show the people how honey is extracted by operating the extractor on the Fair grounds, which will be something new to many, as I was asked more than a thousand times how I got the honey out of the comb.

Yes, we had a grand good Fair, and everything went off fine, and it looks now as if it might be better next year. I got eight 1st premiums, eight 2d, and two 3d. I shall try and do a little better next time.

Bees did not do very well here this season. I take a little extra pains with mine by feeding in the early spring, so as to be ready when a flow comes, and right around me there are six or seven acres of raspberries which gave me some very nice light amber honey. Last spring I sowed quite a bit of catnip and hoarhound seed, also a lot of sweet clover seed, so I am doing all I can to give them plenty of pasture.

Topeka, Kan., Oct. 15.

## Good Prospects for Texas

This is the longest wet spell that south Texas has any record of. We have not seen the sun for three weeks. The ground is thoroughly soaked, and the honey plants are thicker than usual and well advanced. A freeze does not hurt them. We have had no frost yet, and have fine tomatoes, beans and other vegetables in open garden.

Our prospects for an early honey flow could not be better at this time of year.

GRANT ANDERSON.

San Benito, Tex., Dec. 24.

## A Washington Report

I started in the spring with 32 colonies, had one swarm, lost one colony, so I have 32 colonies prepared for winter, and wintering on the summer stands. It seldom gets colder than 20 degrees above zero, and the bees have a flight nearly every week. After having given all the colonies 30 pounds of sealed combs, I have sold 1000 pounds and have about 1360 pounds for sale. Crop will

perhaps average 75 pounds per colony. I have some 10 or 12 supers not extracted yet. I run for extracted honey altogether, and sell it at 10 cents a pound to customers. I never sell any to stores. I put it up in the 1/2 gallon Mason jars, put a nice label on, and they go like hot cakes at 60 cents a jar. This jar holds 5 pounds, and costs me here \$0.50 a gross. Some of my customers send the jars back to be filled again. This year I got some pure fireweed honey, about 300 pounds.

O. K. RICE.

Wahkiakum Co., Wash.

## Comb Taken Out for Wintering

Bees are wintering finely here so far on the summer stands. They have been flying nearly every day until the last ten days. For wintering light colonies, I remove one frame from the hive and spread the frames, leaving one frame to fill the space of two, making sure to have plenty of honey on each side. This gives the bees a chance to form a more compact cluster, and I never have any trouble to winter them in good shape, and they commence to breed earlier than if they had all the combs.

I have never seen this method spoken of in the Bee Journal, and it may be of use to some that have never tried it. I replace the extra frame before time to build comb.

Delta, Colo., Dec. 20. GEO. F. LESTER.

## Following Instinct of the Bees

I have 150 colonies of bees, and have had bees for over 50 years, and I am convinced the nearer the beekeeper conforms to the instinct or nature of the bees the nearer he will be to perfection. The feeding of bees should be as near to pure honey as is possible. I usually have enough honey that is not salable to feed in spring to produce early breeding; for this is the one important time for strong swarms.

My bees produced 1 1/4 cases of marketable honey the past season, notwithstanding the months of May and June were cold and wet.

Marshfield, Wis., Jan. 8. JAY C. DAVIS.

# American Bee Journal

## Classified Department

[Advertisements in this department will be inserted at 15 cents per line, with no discounts of any kind. Notices here cannot be less than two lines. If wanted in this department, you must say so when ordering.]

### BEES AND QUEENS.

**PHELPS' Golden Italian Queens** will please you.

**BEES AND QUEENS** from my New Jersey apiary. J. H. M. Cook, 1Atf 70 Cortland St., New York City.

**GOLDEN all-over Queens.** Untested, \$1.00. Tested, \$3.00. Breeders, \$5.00 and \$10. Robert Inghram, Sycamore, Pa.

**UNTESTED Queens,** 75c each; \$7.50 per doz. Nuclei, \$1.25 per frame. Bees, \$1.50 per pound. Full colonies, 8-frame, \$6.50; 10-frame, \$7.50. Stover Apiaries, Mayhew, Miss.

**QUEENS,** improved three-band Italians bred for business, June 1 to Nov. 15. Untested Queens, 75c each; dozen, \$8.00; Select, \$1.00 each; dozen, \$10. Tested Queens, \$1.25; dozen, \$12. Safe arrival and satisfaction guaranteed. H. C. Clemons, Boyd, Ky.

**PHELPS' Golden Italian Bees** are hustlers.

**GOLDEN QUEENS** that produce Golden Workers of the brightest kind. I will challenge the world on my Golden and their honey-getting qualities. Price, \$1.00 each; Tested, \$2.00; Breeders, \$5.00 and \$10.00. 2Atf J. B. Brockwell, Barnetts, Va.

**GOLDEN and 3-banded Italian and Carniolan queens,** ready to ship after April 1st. Tested, \$1.00; 3 to 6, 95c each; 6 to 12 or more, 90c each. Untested, 75c each; 3 to 6, 70c each; 6 or more, 65c. Bees, per lb., \$1.50; Nuclei, per frame, \$1.50. C. B. Bankston, Buffalo, Leon Co., Tex.

**QUEENS OF QUALITY**—I am booking orders for early queens now. Three-banded Italians only. Circular free. J. I. Banks, Dowlstown, Tenn.

**FOR SALE**—After May 15, two carloads of Italian bees in 10-frame hives on metal spaced or Hoffman frames; new combs. Will quote prices delivered if preferred. The J. E. Marchant Bee & Honey Co., Apalachicola, Fla.

**ITALIAN and Carniolan Queens,** the earliest and best to be had of either race. My circular and prices are free. Grant Anderson, San Benito, Tex.

**PLACE your order early** to insure prompt service. Tested, \$1.25; untested \$1.00. Italians and Goldens. John W. Pharr, Berclair, Tex.

**TRY my best bright yellow queens.** They are beautiful and good honey "getters;" 60c each or \$7.00 per dozen. Safe arrival and satisfaction guaranteed. M. Bates, Rt. 4, Greenville, Ala.

**NOTICE**—R. A. Shults will sell Italian queens in the season of 1915. Untested, \$1.00. After June 1, 75c; tested, \$1.50; select tested, \$2.00. Breeders, \$5.00. Bred from Moore and Doolittle stock. R. A. Shults, R. F. D. 3, Cosby, Tenn.

**PHELPS' Golden Italian Queens** combine the qualities you want. They are great honey gatherers, beautiful and gentle. Mated, \$1.00; six, \$5.00; Tested, \$3.00; Breeders, \$5.00 and \$10. C. W. Phelps & Son, 3 Wilcox St., Binghamton, N. Y.

**I CAN supply you** with Golden or three-banded Italian queens. Tested, \$1.00 each; six or more, 85c each; untested, 75c each; six or more, 65c each. Bees, per pound, \$1.25. Nuclei per frame, \$1.25. Write for prices on large orders. Everything guaranteed. I. N. Bankston, Buffalo, Tex.

**FROM SOUTHERN NEW MEXICO**—My yards will be able to furnish you bees by the pound at an early date. No disease. Satisfaction must be yours. Write at once. I can surprise you on prices. Established in 1914. S. Mason, Hatch, New Mexico.

**FOR SALE**—After May 15, two thousand pounds of Italian bees in any size package with or without queens. Any size order accepted. Write for our circular on prices of bees and queens. Our queens are Island bred, and pure mating guaranteed. The J. E. Marchant Bee & Honey Co., Apalachicola, Fla.

**GRAY CAUCASIAN**—When this bee was first imported three queens came to me direct, resulting in revolutionizing my very small bee-business to 3000 colonies in 53 yards, and improving the once raw stock has been my chief aim, and in true value it has no equal, and a queen from my great bee-business will prove it. For full particulars and prices write. J. J. Wilder, Cordele, Ga.

**500 SAMPLE QUEENS** at 40c on first 500 orders. Moore's Strain Leather Colored Italians. Write for particulars and prices in quantity. April and May orders booked now on 10 percent deposit. Orders filled promptly or notice given when such deliveries can be made. Regular prices: Untested queen, 75c; six, \$4.25; twelve, \$8.00. Timberline Riggs, breeder. Ogden Bee & Honey Co., Ogden, Utah.

**I WILL again sell bees and queens** shipped from north Louisiana in April. In cages, 1 pound, \$1.50; 2 pound, \$2.50. In nuclei, 2 comb, \$2.75; 3 comb, \$3.75. Six or more at one time to one address 5 percent discount. 1914, or young Italian queens for business; \$1.00 extra. Queens only at \$1.25. Shipments will be put up by experts under my personal supervision. I will try to please. A receipt in good condition will be taken. Part payment will secure the order. Bees shipped from Jonesville and Black River, La. H. C. Ahlers, West Bend, Wis.

**CALIFORNIA QUEENS, Nuclei and Bees** bred from the best Doolittle stock, ready for shipment at once. Queens, untested, 75c; dozen, \$8.00. Tested, \$1.25; dozen, \$12. Mismatched, one year old, 50c; dozen, \$5.00. Tested, one year old, 75c; dozen, \$8.00. Nuclei, 2-frame, \$1.50; 3-frame, \$2.25; 5-frame, \$3.00; 10-frame colony, \$4.50. Bees by pound, 1/2 lb., 75c; one lb., \$1.00. Add prices of queens desired to all above prices of bees and nuclei. Delivery guaranteed. No disease. Spencer Apiaries Co., Nordhoff, Calif.

**"NEVER KNOW"**—You will never know how delicious pure extracted orange blossom honey is until you taste it. Clear, thick, and rich, having somewhat the flavor and aroma of fresh orange blossoms. Sample pound by parcel post, prepaid to any U. S. point for 30c in stamps. One gallon 12 pounds parcel post, prepaid up to and including Zone No. 4, \$1.50; Zone 5, \$1.75; Zone 6, \$1.95; Zone 7, \$2.20. One gallon to introduce it, by express f. o. b. Rialto, \$1.00. Your postmaster can tell you what zone you are in, and you can calculate from San Bernardino, Calif., as we are in the suburbs of that city. A 60-pound can by express or freight \$5.40; two cans, a full case of 120 pounds, 8 1/2c per pound, or an even \$10 f. o. b. Rialto. Untested, 3-band or golden Italian queens, \$1.00 each; \$4.25 for six; \$8.00 per dozen. Tested queens, \$1.50 each. Full 8 frame single story colonies with untested queens, \$5.00 each; bees in pound packages, or any way that suits you best, \$1.25 per pound f. o. b. Rialto. For quantity lots on anything ask for prices. Safe arrival and satisfaction to all customers. Rialto Honey Co., Bx. 73, Rialto, Calif.

### HONEY AND BEESWAX

**WANTED**—Comb, extracted honey, and beeswax. R. A. Burnett & Co., 6Atf 173 S. Water St., Chicago, Ill.

**WE HAVE** several lots of extracted honey in 60-lb. cans from 7 to 9c cts. a lb. Sample 10c. I. J. Stringham, 105 Park Pl. New York.

**FOR SALE**—Nice, thick, well ripened amber extracted honey; mild flavored; two 60-pound cans to a case. Single cans, 8c; by case, 7c; ten case lots, 6 1/2c per pound. H. G. Quirin, Bellevue, Ohio.

**FOR SALE**—Spanish-needle, hearts-ease. No. 1 light comb, \$3.00 per case; fancy, \$3.25. Mixed fall comb, \$2.50 to \$2.75 a case; 24 Danz sections to case. Extracted, 120-lb. cases 9c per pound. W. A. Lashaw Co., Carlisle, Ind.

**THE BEEKEEPERS' REVIEW** is now owned and published by the honey producers themselves. It is the paper all honey producers should support. Eight months' trial subscription, beginning with the May number, for only 50c. Sample copy free. Address, The Beekeepers' Review, Northstar, Mich.

**EXTRACTED HONEY**—Best Water White and nice Amber Alfalfa in 60-lb., 30-lb., and smaller tins. State quantity you want. Special prices on ton lots or over. Several carloads just in. Dadant & Sons, Hamilton, Ill.

### MISCELLANEOUS

**WANTED**—Situation by a young man as student; no bad habits; a willing worker. Wages no object. Will Loge, 540 Herman St., Milwaukee, Wis.

**FOR SALE OR EXCHANGE** for honey or bee supplies, 1012 1/2 H. P. American twin cylinder motor cycle. Cost \$240. What's your offer? Emil E. Nelson, Route 2, Renville, Minn.

**FOR SALE**—A good bee location; 40 acres with good house and barn; also 20 colonies of bees with fixtures. Located in the central part of Wisconsin. For further information, write to Geo. Delano, Royalton, Waupaca Co., Wis.

**FOR SALE**—Northern grown unhulled white sweet clover seed (biennial). The northern seed is softer and germinates a much larger percent, therefore cheaper. Price, 50 pounds or more 15c per lb. Less than 50 lbs. same price plus 20c for grain bag. Have limited quantity. Prompt shipment or money refunded. Ira D. Bartlett, East Jordan, Mich.

How many people are there who really know what good Queen Bees are? We suspect that thousands of beekeepers know, so we claim to know, and can sell good queens to all who wish them. The well known three-bands and Goldens. Untested, \$1.00 each; \$4.25 for six; \$8.00 per dozen. Tested, \$1.50 each. Full eight-frame hives with untested queens, \$5.00 each. Bees in pound packages, \$1.25 f. o. b. Riverside. Promptness and honest treatment, and of course satisfaction and safe arrival. Do not return dead queens to us; just state it on a postal, and we will return one at once. Golden Rule Bee Co., Riverside, Calif.

You have been thinking for some time you would like to become a National Beekeepers' Association member. Now is your time; a year's dues to the National and eight months' subscription to our own paper, the Beekeepers' Review, beginning with the May number, both for only a dollar. Address with remittance, The Beekeepers' Review, Northstar, Mich.

### POULTRY

**FOR SALE**—Single Comb Buff Orpington eggs for hatching, pure bloods; \$1.00 per 15 or \$5.00 per hundred. Satisfaction Guaranteed. W. H. Payne, Hamilton, Ill.

### SUPPLIES.

**FOR SALE**—Cedar or pine dovetailed hives, also full line of supplies including Dadant's foundation. Write for catalog. A. E. Burdick, Sunnyside, Wash.

**BROTHER BEEKEEPERS,** send for my new prices on Supplies. I can save you money. Beeswax wanted. W. D. Soper, Jackson, Mich.

**BEE-KEEPER,** let us send our catalog of hives, smokers, foundation, veils, etc. They are nice and cheap. White Mfg. Co., 4Atf Greenville, Tex.



# American Bee Journal

## HONEY AND BEESWAX



CHICAGO, Jan. 15.—The market on comb honey is of small volume, but prices are likely to continue so for the rest of the winter. The best grades of white comb are bringing 16@17c per pound, for ambers from 13c per pound less. Extracted honey is also quiet with an abundant supply. In a small way white clover and linden brings 9@10c per pound. No report of carload sales. Other kinds of white honey are not at all active, and prices vary according to quantity. Beeswax is slow of sale at about 30c per pound. R. A. BURNETT & Co.

CINCINNATI, Jan. 21.—The demand for comb and extracted honey is somewhat improved, and conditions in general look more favorable. Comb honey is selling at \$3.50 to \$4.00 per case; fancy white clover extracted from 8@10c, and southern amber and the like have been selling from 5½@7c a pound, according to the quantity and quality purchased. We are paying 28c a pound delivered here for bright yellow beeswax. THE FRED W. MUTH CO.

DENVER, Jan. 21.—We have a small supply of comb and extracted honey is being offered at the following jobbing prices: Fancy white, \$3.15 per case of 24 sections; No. 1, \$3.00 per case, and No. 2 at \$2.85. There is a fair demand for strictly first-class white extracted honey. Our local jobbing prices are 8½@8¾c for white; 8@8½c for light amber, and 7@8c for amber strained. We buy beeswax and pay 28c in cash and 30c in trade for clean yellow beeswax delivered here. THE COLO. HONEY-PRODUCERS' ASS'N. Frank Rauchfuss, Mgr.

INDIANAPOLIS, Jan. 18.—The market on comb honey has been fairly good the past week, and quite a demand for extracted of

good quality. We are still selling No. 1 choice white comb at \$4.50 to \$5.00 per case; choice Cuban comb which is of fine quality at \$4.00. Best white extracted in 60-pound cans, 9½@10½c; California sage, 10@11c; white clover and basswood mixed, 9½@10c. Producers are being paid 30c cash for beeswax, or 32c in trade delivered here. WALTER S. FOUDRER.

NEW YORK, Jan. 18.—There is very little doing in comb honey. There is some demand for No. 1 white stock, which is selling at around 14@15c per pound, while off grades are neglected altogether. Buckwheat is pretty well cleaned up at this time. As to extracted, the demand is only fair, and mostly for choice grades of which there is not an overstock, with prices ruling from 8@9c per pound, according to quality. Large quantities from the West Indies have been and are arriving at this market, and prices on these grades are ruling very low, and we can see no indication for any improvement for the time being. Beeswax is quiet, selling at from 28@30c per pound according to quality. HILDRETH & SEGELKEN.

BOSTON, Jan. 15.—Comb honey is moving slowly. Mostly western, 15@17c. California amber, extracted, 8½@9c; white, 10@10½c. BLAKE-LEE COMPANY.

KANSAS CITY, MO., Jan. 14.—The receipts of both comb and extracted honey are more liberal and the demand fair. We quote: No. 1 white comb honey, 24-section cases, \$3.50; No. 2, \$3.25; No. 1 amber, \$3.25; No. 2, \$2.75 to \$3.00. Extracted, white, per pound, 7½@8c; amber, 6@7c. Beeswax, No. 1, 28c; No. 2, 25c. C. C. CLEMONS PRODUCE COMPANY.

## Canadian Beekeepers!

The undersigned desire to thank their many friends for their hearty support during the past when our business was carried on under the name of THE CHAS. E. HOPPER COMPANY. The undersigned have bought out all the assets of the late CHAS. E. HOPPER COMPANY which partnership was dissolved on Nov. 20, 1914. We beg to announce an all Canadian and American line, including Dadant's foundation, the New Drive Extractor, Gasoline Engines, etc. We have now on the press the most complete catalogue of all kinds of beekeepers' supplies. This will be sent out shortly.

THE ROOT CANADIAN HOUSE

185 Wright Avenue, Toronto, Ont.

## BUCKEYE CHAFF HIVES DOVETAILED HIVES

Sections, Comb Foundation  
Choice Northern-Bred Italian Queens  
Bees by the pound

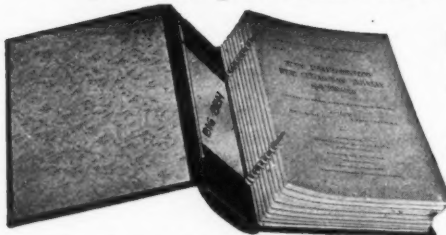
General Agents for Root's Goods in Michigan

SEND FOR 1915 CATALOG

M. H. HUNT & SON  
Lansing, Mich.

## BIND YOUR JOURNALS

So that you can refer to them at any time



The cut illustrates the **Big Ben Binder**. It is made of heavy cloth and is arranged so that each number can be filed as received.

We have a quantity of these made especially for our readers, with the name **American Bee Journal** in gilt on the cover. Each Binder holds the issues for three years. When bound your Bee Journals will appear to be in genuine book form. The price of this Binder alone is \$1.00. We club it together with a year's subscription to the **AMERICAN BEE JOURNAL**, both for \$1.60.

American Bee Journal, Hamilton, Illinois

## BOOKS FOR BEE - KEEPERS

FOR SALE BY

AMERICAN BEE JOURNAL,  
HAMILTON, ILLINOIS.

**First Lessons in Bee-Keeping**, by Thos. G. Newman, revised by C. P. Dadant.—Intended mainly for beginners. Nearly 200 pages, and over 150 pictures. Bound in strong paper cover, showing bee-brood in all stages of development from the newly-laid egg. This book contains the foundation principles of bee-keeping, as its name indicates. Price, postpaid, 50 cts.; or free with the **American Bee Journal** one full year if paid strictly in advance—by either new or renewal subscription at \$1.00.

**Fifty Years Among the Bees**, by Dr. C. C. Miller.—340 pages, bound in cloth, and illustrated with 112 half-tone pictures taken by Dr. Miller himself. It is a good, live story of successful bee-keeping by a master of the subject, and shows with clearness just how Dr. Miller works with bees and produces tons of honey. Price, \$1.00, postpaid; or with the **American Bee Journal** a year, \$1.80; or given FREE as a premium for sending 8 new subscriptions at \$1.00 each.

**Scientific Queen-Rearing**, as Practically Applied, by G. M. Doolittle.—It tells how the very best Queen-Bees are reared in Nature's Way. A good authority says: "It is practically the only comprehensive book on queen-rearing now in print. It is looked upon by many as the foundation of the modern methods of rearing queens wholesale." Price, bound in cloth, 75 cts., postpaid; or with the **American Bee Journal** a year—both for \$1.50. The same book bound in leatherette, 50 cts., postpaid; or free with the **American Bee Journal** one full year if paid in advance strictly, by either new or renewal subscription at \$1.00.

**A B C & X Y Z of Bee Culture**, by A. I. & E. R. Root.—Over 500 large pages describing everything pertaining to the care and management of the honey bees. It is a veritable encyclopedia on bees. 400 engravings. Bound in cloth. Price, postpaid, \$2.25, or with the **American Bee Journal**, both for \$2.75, or given FREE as a premium for sending five new subscriptions at \$1.00.

**A Modern Bee Farm**, by Samuel Simmins. The author is a live English beekeeper. He has kept up with the progress in this line not only in his own country, but all over the world. His views are determined, but very well taken, and his points are made with an accuracy which is convincing. Cloth bound, 470 pages. Price, postpaid, \$2.00, or with the **American Bee Journal**, both \$2.75.

**Alexander's Writings on Practical Bee-Keeping**.—The late E. W. Alexander is the man who kept 700 colonies of bees at his home place in New York. He wrote a series of articles which have been published in book form. They discuss bee-keeping in broadest terms. 95 pages, paper bound. Price, 50 cents, postpaid; or with the **American Bee Journal** one year, \$1.25.

**A Year's Work in the Out-Apiary**, by G. M. Doolittle.—The author is an experienced beekeeper, who tells in this little book the requirements necessary for keeping bees away from home. For any one who is intending to keep bees on a large scale, this book will be invaluable. Paper bound, contains 60 pages. Price, 50 cents; or with the **American Bee Journal** one year, \$1.25.

DO YOU READ THE

## Progressive Poultry Journal?

If not, send for a Sample Copy. An up-to-date poultry paper. Every Beekeeper should keep Poultry. Write for advertising rates.

Progressive Poultry Journal Publishing Co.,  
MITCHELL, SOUTH DAKOTA

On the back cover of this magazine appears the advertisement of the Country Gentleman. Since being taken over by the present management this magazine has become one of the foremost of farm papers. It is a paper well worth while, on account of the excellence of material and make up.

# American Bee Journal

## INCREASE THE YIELD OF YOUR FARM

The European war is doubling the demand for American farm products. We can increase our acreage but this will not meet the demand—we must increase our yields per acre. We must do better farming, not only in the East and Middle West, but in the great grain raising territory west of the Missouri River.

Everybody knows that by following the Campbell System of Soil Culture, crop yields have been doubled in every State of the Union from New York to California. Why not learn what the principles of the Campbell System are and adopt them? You can get all this and a thorough agricultural education without leaving home by taking a course in the

### Campbell Correspondence School of Soil Culture

You can have your choice of eight courses, Soil Tillage, Soil Improvement, Small Farming, Horticulture, Irrigation, Dry Farming, Farm Engineering and Animal Husbandry, all for a nominal tuition fee, no board, to pay, no books to buy, everything furnished, and you can use your spare time while still running your farm or holding your job.

We cannot tell you all about these courses, the faculty and the free bureau of advice in this ad, but we will be glad to send you full information at any time. Write and ask for our free catalog No. 3, and a sample copy of the Scientific Farmer.

**Campbell Scientific Soil Culture Company** Billings, Montana

## THREE-BANDED ITALIANS—GET THE BEST

Twenty years of breeding and selection has resulted in an exceptionally vigorous and long-lived strain of bees, unexcelled for gentleness, prolificness and honey-gathering qualities. No disease.

	Before May 1st			After May 1st		
	1	6	12	1	6	12
Untested .....	\$1.25	\$ 6.50	\$11.50	\$.75	\$4.00	\$ 7.50
Tested .....	1.50	8.00	15.00	1.25	6.50	12.00
Select tested .....	2.00	10.00	18.00	1.50	8.00	15.00
1-lb. pkg. bees .....	2.00	11.00	21.00	1.50	9.00	18.00

Breeders, \$5.00 each, any time.

Safe arrival and satisfaction guaranteed on all queens to all points in United States and Canada. Queens for export are carefully packed in export cages; but safe arrival is not guaranteed. Bees by the pound guaranteed within six days of Mathis, Tex. If queen is wanted with bees by the pound, add price of queen wanted to price of bees. Better let me book your orders now.

**H. D. MURRY, MATHIS, TEXAS**

## The Beekeepers' Review Clubbing List for 1915

In the following combinations we offer periodicals of sterling worth. Remember, you are not receiving some premium of questionable value, but a saving of dollars and cents on your 1915 reading matter. The combination offers with the reduction we are able to allow are as follows:

The Review	\$1.00	All five
Woman's World	.50	\$1.25
Household Magazine	.50	the bargain
People's Popular Monthly	.50	of the
Farm Life	.50	season

Total value \$3.00

Here is another good one:

The Review	\$1.00	Both for
The Youth's Companion	2.00	only \$2.25

The following are of sterling cash value:

The Review	\$1.00	Both for
American Bee Journal	1.00	only \$1.50

Save \$1.30 on this combination.

The Review	\$1.00	\$4.00 worth
Everybody's Magazine	1.50	for only
The Delineator	1.50	\$2.70

Another is:

The Review	\$1.00	Both for
Reliable Poultry Journal	.50	\$1.25

The Review	\$1.00	Both for
Gleanings in Bee Culture	1.00	only \$1.50

The Review	\$1.00	\$3.00 cash
Gleanings in Bee Culture	1.00	value for
American Bee Journal	1.00	only \$2.00

Special offer to new subscribers: To those ordering early before the supply is exhausted, we will send in connection with any of the above combinations, the last eight months of the Review for 1914, which contains the National convention report with many valuable papers read at said convention, besides other articles of value not appearing in other papers. Address, with remittance,

**THE BEEKEEPERS' REVIEW, Northstar, Mich.**

## ARE YOU GOING TO BUY LAND?

If so, you should read the Farm and Real Estate Journal. Its editors are authorities. They will keep you informed on the possibilities in all sections of the country, and will save you money and mistakes in buying. Only publication of its kind. Established 20 years. Send 10c today for a month's trial subscription, or 25c for one year. It will be stopped at the end of the time ordered unless you renew.

**Farm and Real Estate Journal**  
Box 32, Traer, Iowa

## LOOK! BEEKEEPER

FOR SALE 3 SQUARE SHEARS

Two cuts 24-inch foot power; one cuts 30 inch. Hand-lever power in good condition; cuts fine. Just the thing for beekeepers. Price, \$10 each f. o. b. Syracuse, N. Y.

**H. E. HESSLER CO.**

## THE TRUTH ABOUT FLORIDA

To learn the truth about a country you want to read the agricultural paper which the growers of that country read, and THE FLORIDA GROWER, published at Tampa, Florida, is Florida's one agricultural weekly. It is unique in the agricultural field. It carries more advertising than any agricultural paper in the country; it has a more interested body of readers; it is instructive and entertaining. Sample copy free or 50 cents for a four months' trial subscription. 50 cents back if not satisfied.

**THE FLORIDA GROWER**

Box A-B, Tampa, Florida

FOR YOUR OWN GOOD

Let us figure on your Supplies

**PAGE-KENKEL**

**MFG. CO.,**

**NEW LONDON, WIS.**

"NONE BETTER"

## Queens and Bees

Our queens and bees are from the best imported Italian stock. Unexcelled for gentleness and honey. Ready April 1.

One untested queen, 75c; 6, \$1.25; 12, \$8.00. 1/2 lb. of bees, 90c; 1 lb., \$1.25. If a queen is wanted with the bees, add the price. Safe arrival and satisfaction guaranteed.

**N. FOREHAND & CO.,**

Ft. Deposit, Ala.

**PONTIAC ENGRAVING CO.**  
ARTISTS  
ENGRAVERS-ELECTROTYPERS  
542 550 S. DEARBORN ST.  
PONTIAC BLDG. CHICAGO.

## FARM SEEDS

Alsike Clover seed, small red, mammoth. Timothy, Alfalfa, White and Yellow Sweet clover and blue grass, millet, rape, etc. Also thoroughbred seed corn. Catalog apriary supplies free. Write for prices on seeds and samples.

**F. A. SNELL,**

Milledgeville, Carroll Co., Illinois



# THE BEST TIME TO BUY SUPPLIES

The season just passed has demonstrated more clearly than ever the necessity for being prepared for a honey-flow **before** it comes. If you wait until the season is upon you, the chances are that the greater part of the crop will be lost while you are impatiently waiting for supplies to arrive. It may seem a little early now to think of next season's honey harvest; but the fact of the matter is, this is just the time to order goods for next season.

We are beginning now to replenish our stocks. We shall soon have carload orders coming from the factory. Special orders placed now can have just the attention they need, both here and at the factory, and you may have your goods sent in one of our cars, thereby saving on transportation charges. Regular stock will come straight to you from our warehouse in new unbroken packages, and you can put the goods together in your odd minutes, thereby saving the expense of extra help in the spring.

Our usual discounts for early orders apply again this season—5 percent for cash orders sent in November, the discount lessening one percent per month as the season advances. These discounts mean a considerable saving, and you might as well take advantage of the highest by ordering now. No change of prices has as yet been announced, and you may, therefore, order from your present catalog. If your catalog has been mislaid, write us at once and we will send another.

## C. H. W. WEBER & CO.,

2146 Central Avenue,

Cincinnati, Ohio

### DADANT'S FOUNDATION

#### A LETTER IN "JAPANESE-ENGLISH" AS IT CAME TO US

MINO, JAPAN, AUG. 13, 1913.

DADANT & SONS, Hamilton, Ill., U. S. A.

*Gentlemen:*—Widely is known the matchlessly excellent quality of your foundation. This can amply be testified by the various experiments I have made in the course of this year, and also by the many testimonials of those who having been supplied with the same by my apiary, have already made experiments upon it.

It is indeed an Ideal Foundation, and this cannot be blamed of an exaggeration when I take into consideration the astounding rapidity with which bee combs are built out of it.

Hoping your further success, I remain, Sirs,

Truly Yours,

K. MIDZUNO.

**Comb Foundation, Bee-Supplies, Honey Beeswax, Sweet-Clover Seed, etc. Old Combs, Cappings or Slum-gum rendered into Beeswax on shares and Beeswax worked into Foundation**

**DADANT & SONS,  
HAMILTON, ILLINOIS.**

DADANT'S FOUNDATION

DADANT'S FOUNDATION







## MARSHFIELD GOODS

BEE KEEPERS:—

We manufacture Millions of **Sections** every year that are as good as the best. The **CHEAPEST** for the Quality; **BEST** for the Price. If you buy them once, you will buy again.

We also manufacture **Hives, Brood-Frames, Section-Holders and Shipping-Cases.**

Our Catalog is free for the asking.

**Marshfield Mfg. Co.,**

**Marshfield, Wis.**



### EARLY ORDER DISCOUNTS WILL Pay You to Buy Bee Supplies Now

30 years' experience in making everything for the beekeeper. A large factory specially equipped for the purpose ensures goods of highest quality. Write for our illustrated catalog today.

**LEAHY MFG. CO., 90 Sixth St., Higginsville, Missouri**

## START THE SEASON RIGHT

By using **Dittmer Foundation** the bees like it for it's made to just suit them, and is just like the Natural Comb they make themselves.

Send for prices on having your Beeswax made into Comb Foundation, which includes all freight charges being paid.

**All other Supplies in stock**

**Gus Dittmer Company, Augusta, Wisconsin**

## WANTED Honey!

Extracted and Comb

— ALSO —

### Beeswax

Will pay full market value. Write us when you have any to dispose of

**Hildreth & Segelken**

265-267 Greenwich St., New York, N. Y.

### Beekeepers' Supplies

Such as Winter Cases, Hives, Sections, Covers, Bottoms, Bodies, Supers, Brood-frames of every description, Shipping-cases, Section-holders, Comb-foundation, Smokers, etc.

Get my prices before placing your orders.

**R. H. SCHMIDT**

Rt. 3, Box 209, Sheboygan, Wis.

### EASTERN Beekeepers

If you are in need of shipping cases, cartons, honey jars, or anything in the supply line, let us quote you on them. No. 25 jars with bronze cap, \$4.60 a gross. Five gross, \$4.30 a gross. Untested Italians queens, \$1.00.

**I. J. STRINGHAM**

105 Park Place, New York

APIARIES: Glen Cove, L. I.

### OUR VERY BEST IS THE VERY BEST BEE SUPPLIES

Best Sections, Best Shipping Cases

Best of all Supplies

Best prices you will get for your honey when put up in our sections and shipping cases. "LOTZ" sections and shipping cases have stood the test. Why? Because they are perfect in workmanship, quality and material. Buy LOTZ goods when you want the BEST. Our 1915 catalog ready by Jan 15. Send your name and get one.

H. S. DUBY & SON, St. Anne, Ill., carry a full line of our goods.

**AUG. LOTZ CO. BOYD, WIS.**

**FREEMAN'S FARM** North Yakima, Wash.

Successor to Northwest Farm and Home 69 YEARS OLD

If you want a descriptive and agricultural magazine, it will inform you all about the methods in the Pacific Northwest. Send One dollar during October, November or December, and the magazine will be sent for one year. Cut rate of one-half price now on



To put it at once into Half a Million Farm Homes



## THE COUNTRY GENTLEMAN

The big \$1.50 farm  
paper, will be mailed  
to you 3 months—

# 13 Weeks—25 Cents

THE COUNTRY GENTLEMAN treats farming as a business—not only *growing* stuff, but *selling it at a profit*—the chief end of any business.

These 13 issues—for 25 cents—would make a book of nearly 1,000,000 words and 800 illustrations, covering more than 500 farm subjects, divided about as follows:

General Farming . . . . .	95	Articles
Livestock . . . . .	75	"
Marketing, Management and Finance . . . . .	60	"
Buildings, Equipment and Labor .	45	"
Poultry . . . . .	55	"
Vegetables, Flowers . . . . .	60	"
Dairying . . . . .	25	"
Orchards and Trees . . . . .	45	"
Rural Social Life . . . . .	25	"
Home Making . . . . .	55	"

## Free Personal Service

Any farm question that puzzles a reader of THE COUNTRY GENTLEMAN will be answered personally and promptly *by mail*. More than 100 practical experts are at our call to render this free personal service.

**3 MONTHS  
(13 ISSUES) 25¢**

THE CURTIS PUBLISHING COMPANY, Box 451, Philadelphia

Name \_\_\_\_\_ P. O. Address \_\_\_\_\_

Mail to us now \_\_\_\_\_

R. F. D. Route \_\_\_\_\_

PASTE 25¢ HERE and start at once

(In Canada 50c.)